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ABSTRACT OF

The Bolingbroke Lecture

ON

PROGNOSIS.

Delivered before the South-West London Medical Society on June 10th, 1914,

BY W. HALE WHITE, M.D. LOND., F.R.C.P. LOND.,

SENIOR PHYSICIAN TO GUY'S HOSPITAL.

MR. PRESIDENT AND GENTLEMEN,—When your secretary did me the honour of inviting me to address you, he asked that the paper might be concerned with something that would especially interest those whose work is chiefly clinical. Now we have to find out what is the matter with our patients, to treat them, and to try to foretell what the result of their illness will be, and it is with prognosis that I propose to deal chiefly. Of the importance of it there is no doubt; patients' friends do not care what is the matter, or what you do—all they care is will the sufferer get well. Hippocrates said: "The best physician is the one who is able to establish a prognosis, penetrating and exposing first of all at the bedside the present, the past, and the future of his patients, and adding what they omit in their statements. He gains their confidence, and being convinced of his superiority of knowledge they do not hesitate to commit themselves entirely into his hands. He can treat, also, so much better their present condition in proportion as he shall be able from it to foresee the future."

The art of prognosis is as old as the hills and has probably existed as long as the human race. Astrologers were constantly attempting to find out if patients would get well. To quote from Dr. C. A. Mercier's FitzPatrick lectures recently published[1]: "If the moon should be in conjunction with a propitious planet in the ascendant, and should be moving forward and her light waxing, and both should be free from adverse influences, then the disease will be quickly cured; but if the moon should be in the House of Death the patient cannot be saved." However, to leave these fanciful speculations and to turn to modern prognosis. Obviously we cannot discuss the prognosis of every disease, but let us take a few of the commoner.

PROGNOSIS IN SYPHILIS.

Syphilis has been much before the profession lately, and it has been shown that it is considerably more far-reaching in its effects than was formerly thought. If there were no syphilis there would be no tabes dorsalis and no general paralysis. Further, both these diseases may occur in children and be due to congenital syphilis, and some of the many mentally deficient children may owe their trouble to congenital syphilis. Then, although syphilis is not the only cause of atheroma, for atheromatous vessels are found in Egyptian mummies of about 1000 B.C., which is long before syphilis had been introduced into the old world, yet it is a cause for some cases of atheroma, and if you will have a Wassermann reaction done on all cases of atheroma of the aortic valves you will sometimes find it positive when there is no other evidence of syphilis. Without mentioning other results of syphilis it is clear that it is most important to try to foretell the outlook of this disease.

Now it used to be taught that if a patient had had two years' continuous treatment he might be regarded as cured, but we all often come across cases which show that this is certainly not always true, and the following figures from the "Medico-Actuarial Mortality Investigation" (vol. iv., Part 1, 1914) support my contention:—

Class 1.—Syphilis Certain, Thoroughly Treated; 2 years' Continuous Treatment and 1 year's Freedom from Symptoms.

	Actual deaths.	Expected deaths.	Ratio.*
Certain syphilis between 3 and 5 years prior to application	13	9·32	139%
Between 5 and 10 years	34	19·56	174%
More than 10 years	53	24·42	217%

Class 2.—Not Thoroughly Treated or no Details Given.

Certain syphilis between 2 and 5 years prior to application	44	15·52	284%
Between 5 and 10 years	54	25·52	212%
More than 10 years	76	59·09	129%

Class 3.—Doubtful Syphilis.

More than 2 years prior to application	67	48·71	138%

* Being the ratio of actual and expected deaths.

All these persons, all men, were apart from their syphilis exceptionally good lives, for in spite of their syphilis they were accepted at standard rates; yet see what bad lives they were. The death-rate from tabes and general paralysis was five times the normal, and the death-rate from non-syphilitic diseases as pneumonia was also excessive. We see the same with the figures of the Gotha Insurance Company of Germany, for among 1778 men who had undergone treatment for syphilis there were 487 actual deaths against 290 expected. I think you will agree with me that the prognosis of syphilis treated as it was till quite recently is worse than we commonly thought. These cases, however, remind us that for a long while it was taught that the outlook of tabes as regards amelioration was very gloomy. Now we know it is not so bad as this, for with a thorough course of mercurial inunctions or injections many tabetic symptoms lessen, and perhaps future investigations will show that they do better still if the mercurial treatment is preceded by salvarsan or by salvarsanised serum injected intrathecally. Since, too, we taught patients the importance of exercises the ataxia may lessen considerably.

TUBERCULOSIS.

Everything points to the conclusion that the outlook for sufferers from tuberculosis is much better than it was. There has in this country been a steady fall in the mortality during the last 60 or 70 years, and apparently the rate of fall has not been altered by modern treatment; but, of course, it is possible that the rate might have been slower during the last few years if it had not been for treatment. All post-mortem room experience shows that healed tubercle is very common, and there is no case of phthisis so bad as to be quite hopeless. Even cases of long-continued suppuration from cavities or dilated tubes can occasionally be cured by the induction of an artificial pneumothorax, and I have a friend in whom the tuberculous process spread to the ribs causing necrosis of some, his temperature was 106° F., and yet he recovered well enough to enjoy life and look after a small farm. The most fatal variety of tubercle is

[1] THE LANCET, Nov. 23th, 1913, p. 1522; April 18th, 1914, p. 1119.

tuberculous meningitis, and fortunately that is one of the rarest complications of ordinary adult phthisis, but I know of two cases of undoubted tuberculous meningitis in children which recovered.

The most important thing to observe in trying to foretell the course of a case of phthisis is the state of the gastro-intestinal tract. Anorexia, vomiting, and diarrhœa are very bad signs, especially if persistent; indeed, loss of weight from any cause is bad. The most important instrument in a case of established phthisis is not a stethoscope but a weighing machine. But very bad as is the outlook of tuberculous intestinal ulceration even that may heal, for Mr. F. J. Steward once opened the abdomen of a patient of mine in whom six cured tuberculous ulcers of the intestine were found. The signs next in importance are those of general infection: for example, a persistently rapid pulse, continued pyrexia, and frequent profuse sweats are all bad, but it is surprising what a time some of these may persist and yet return to normal. These signs of general infection are of much greater importance than pulmonary signs; very few patients die from the local disease of the lungs; those that die do so because of the intensity of the general infection. Albuminuria and profound anæmia are unfavourable, and so is a strong family predisposition.

Of associated conditions diabetes, syphilis, and pregnancy very greatly increase the gravity of the outlook. As far as my experience goes I am much impressed with the extreme seriousness of either syphilis or pregnancy occurring in a person with active phthisis. I well remember a young man with active phthisis who acquired syphilis. The rapidity with which he went downhill after this was remarkable, but I have no evidence to show whether or not healed phthisis is relighted by syphilis. On the other hand, patients with pleurisy or emphysema often do well.

Many patients are brought to us because they have coughed up a little blood. The patient usually pleads that it comes from the throat, and sometimes he looks so well and his physical signs are so healthy that the doctor comes to the same opinion, but this is always hazardous, for nearly always such blood means slight phthisis. Cases such as these often come before us for life insurance. The following results are interesting:—

	Actual deaths.	Expected deaths.	Ratio.
A. One hæmoptysis within 5 years of application	46	30·41	151%
B. One between 5 and 10 years prior to application	63	48·16	131%
C. One or more hæmoptysis, last more than 10 years prior to application	223	219·6	102%

Now these were all taken at normal rates, and therefore apart from the hæmoptysis were apparently exceptionally good lives, yet we see that really they were much under average lives. The deaths from tuberculosis of the lungs in Group A were five times the normal, in Group B three times, and in Group C twice. In connexion with this it is interesting to notice that an actuarial investigation was made of 3000 patients who had been in the Adirondack Sanatorium from 1885 to 1911. The mortality after the date of discharge from the sanatorium of those apparently cured was about twice the normal.

I have just mentioned that cases of phthisis accompanied by pleurisy often do well, and that I think is true; but at the same time a person who has had tubercle pleurisy cannot be considered normal, for he is liable to phthisis. Thus actuarial investigations show that the mortality of those who except for a history of pleurisy are healthy is above the normal rate, and that among those who have had pleurisy the death-rate from tuberculosis of the lungs is three times the normal.

HEART DISEASE.

It is strange that for many years several (although not all) physicians quite missed the most important factor in the prognosis of heart disease—namely, the state of the cardiac muscle—and concentrated their attention on the murmurs. The tale is told that the chaplain of one of the London hospitals had a loud murmur, and the medical staff reported that he could not live long with such a murmur. He was pensioned at his full salary and lived 40 years.

Generally speaking, the louder the murmur the better, for it means that owing to the vigour of the cardiac muscle the blood is being sent forcibly through the diseased valve. The loudest murmur I ever heard was audible to the unaided ear a yard from the foot of the bed. The patient sought relief because the noise of his murmur kept his wife awake. He was doing his work as a dock labourer. Another man with a loud murmur won a London to Brighton walking race. I knew a doctor with a loud murmur who worked and lived to be over 80. Soft murmurs indicate a feeble muscle; thus many a case of valvular disease has no murmurs on admission to the hospital, the muscle is too exhausted, but a murmur appears after the patient has rested in bed. The cases of mitral constriction with a loud crescendo murmur do well; the loudness of the murmur shows a strong auricle forcing the blood so strongly through the constricted auriculo-ventricular orifice as to compensate effectually for its narrowing. Then, too, we must remember that many of the weakest murmurs we hear are directly due to myocarditis, the weakened muscle allowing of dilatation of the auriculo-ventricular ring.

More than half the cases of heart disease are caused by acute rheumatism, the micro-organism of which either directly or through its toxin affects chiefly the synovial membranes and the heart. To reach the heart, however, the poison must be carried there by the coronary vessels, and far more of it must reach the muscle than the valves or the pericardium; indeed, considering the fewness of the vessels in the valves, it is strange that they are affected at all, and putting aside malignant endocarditis the affection of them would hardly matter were it not that they pucker and so become inefficient. It is clear that the implication of the muscle is the most important. Indeed, it is by damage to the cardiac muscle by toxins that probably most people die; hence that invaluable rule of prognosis that a rapid pulse is a bad sign. We all know that a case of suppurative peritonitis is doing badly if the pulse is mounting in rate. Whether or not the pulse is mounting often determines whether an operation on the abdomen shall or shall not be performed; a rapid pulse is of bad omen in typhoid fever, pneumonia, phthisis, exophthalmic goitre, and indeed in any condition. In life insurance work the actual deaths of those with rapid pulses are double those which would be expected with healthy lives. The importance of the muscle being so great we shall be guided in our prognosis by the signs of diseased

muscle—e.g., rapidity of the pulse, force of the apex beat, force of the pulse, signs of dilatation of the heart, and in hospital work the electrocardiograph is of help.

In passing we may note that an irregular pulse is not so often of bad prognostic significance as a rapid one. Probably because its very irregularity means—as in the case of extrasystoles—long pauses during which it can recover itself. Nevertheless, irregularity is of some considerable importance, for Cowan tells us that out of 102 cases of mitral disease 31·4 per cent. died, but the deaths among those with regular rhythm were 20·5 per cent., with irregular 58·6 per cent. Among 58 cases of aortic disease 29·3 per cent. died; 25·6 per cent. of them had regular rhythm and 40 per cent. irregular. Of all irregularities that due to extrasystoles is by far the least important.

When a patient is lying in bed with recent rheumatic carditis we must keep him in bed, it may be weeks, so long as there is any clinical evidence that the affected muscle is undergoing repair, but if the murmur is valvular we do not need to keep him in bed till it has disappeared; indeed, we might keep him till his death if we were to wait for that. Nothing shows the skill of a doctor more than his management of heart cases. If he keeps them in bed too long he does irreparable harm, for the muscle gets feeble and flabby; if he keeps them in too short a time the prognosis is made bad because the raised blood pressure that follows exertion leads to dilatation of the heart if the muscle is weakened by unhealed carditis. When such a case gets up the ultimate prognosis will depend entirely upon the judgment with which we allow a little exercise so as to strengthen the heart, but not so much as to dilate it; for the first few weeks the doctor must frequently see his patient, increasing or decreasing the exercise day by day. All this can generally be done at home; if so, there is no need for places which lay themselves out for cardiac patients. We cannot leave the prognosis of heart disease without reminding you of the remarkable fact that rheumatic nodules are always associated with severe cardiac disease; we now know this because there are always similar nodules in the muscle substance of the heart.

PNEUMONIA.

Let us take another common disease—viz., lobar pneumonia—to illustrate some points in prognosis. A most important circumstance is the age. I took at random from my case-book 12 cases. Six were over 60; of these, 5 died without any complication. Six were young. The first was a girl, aged 15, who had such severe mania that Sir George Savage and I both thought she would die; she got perfectly well. The second, a lad with such severe pericarditis that his temperature was up for three weeks, got well. The third, a girl aged 15, who coughed up pus from an empyema following the pneumonia, got quite well; the fourth, a girl so ill that she was comatose, with a temperature of 105° F., got well; the fifth, a male aged 25, got double empyema after his pneumonia, but made a complete recovery; and the sixth, a young man with respirations of 108, got quite well. Probably the next most important fact in the prognosis of pneumonia is whether the patient is alcoholic; those who have drunk heavily rarely recover. It is important to remember that it is not often the amount of lung that is involved that kills in pneumonia, as is shown by the fact that it is comparatively rare to see a patient with pneumonia dying livid, but pneumonia is chiefly fatal by the action of the toxin on the heart; a very rapid feeble pulse of poor volume is always very serious.

Much can be learnt about the prognosis in pneumonia from the temperature chart. A high temperature—provided it is not so high, e.g. over 105°, as to be in itself dangerous—is a good sign. On the other hand, a low temperature—namely, under 100°—is a bad sign, for it means that the patient is not reacting to the stimulation of the invasion by the pneumococcus. In the same way a striking leucocytosis indicating a good reaction is favourable—for example, in consecutive cases that got well the counts were 30,000, 27,000, 40,000, 28,000, 24,000.

As with so many diseases, so with pneumonia, the time at which the patient has the disease is important; thus, in some years the mortality is high, in others low. In 1895, when post-influenzal pneumonia was very rife, in some institutions the mortality shot up to the appalling figure of 64 per cent. If sufferers from pneumonia sleep badly they do badly as a rule, and if they sweat much apart from the crisis they do badly, probably because the sweating indicates severe infection.

NEPHRITIS.

Turning now to the prognosis of nephritis. One of the most serious facts is the presence in the degenerative variety of albuminuric retinitis. Sufferers from chronic renal disease in whom this is present probably never recover. In one set of cases 85 per cent. of them were dead within the first year after the discovery of the degenerative retinitis, and 9 per cent. more died in the second year. On the other hand, inflammatory retinitis, best shown by optic neuritis, may be associated with acute nephritis, which gets well.

An important circumstance in the prognosis of chronic interstitial nephritis is the age of the patient. Young subjects with chronic granular kidney rarely if ever do well, and almost anyone under 30 who has it will soon die. Probably the cases in the first half of life are a different disease from the cases in middle life, for while people with interstitial nephritis in later middle life may die from cerebral hæmorrhage or pneumonia or various conditions which are associated with granular kidney, those in the first half of life who have granular kidney almost invariably die soon of uræmia.

The sufferer from this disease who complains of general weakness does badly, so does the patient who is thin and pale, and if a patient takes to bed because of weakness he probably will not live long. Skin troubles, too, increase the seriousness of the outlook; the rare general dermatitis of Bright's disease usually kills, and very œdematous parts are liable to erythema or more severe inflammatory changes in the skin, and these are frequently fatal. Severe long-continued diarrhœa in Bright's disease, inasmuch as it points to some colitis or enterocolitis, is of very dangerous prognosis. To estimate the outlook when the patient is definitely uræmic is very difficult, but, speaking generally, the more severe the symptoms of uræmia the worse the prognosis. When the patient has a cerebral hæmorrhage the outlook is by no means necessarily fatal. The public have a saying that the third stroke is fatal. The following point to a fatal result: (*a*) Coma still present at the end of 24 hours; (*b*) Cheyne-Stokes breathing as a result of the hæmorrhage; (*c*) much mucus in the lungs; (*d*) paralysis of all four limbs; (*e*) a very low temperature; and (*f*) a very high temperature.

Pneumonia, pleurisy, peritonitis, and pericarditis all greatly increase the gravity of the outlook. Suppression of urine is of most serious importance. The actual amount of albumin is not of much value in prognosis, but an increase in the amount is of bad augury, a lessening is of good. The normal amount of urea in the blood is 0·3 per cent.; anything over 1·0 per cent. shows that uræmia is likely, in which condition we may get a reading as high as 3 per cent.

DIABETES.

Diabetes is a disease of great interest from many points of view, and not least from that of prognosis. In the first place it is a racial disease, being terribly common among the natives of India, and at the present time the frequency of death from diabetes in the East is so serious that the Government have sent out a member of our profession to investigate the subject. Then, too, we have the well-known fact that it is commoner in Jews than Christians.

Quite apart from race, however, it is a family disease. Thus Otto May, investigating 76,333 deaths at the Prudential Assurance Company, found 1143 were from diabetes. The family histories of these showed a death from diabetes in 41—i.e., 3·6 per cent. A control investigation of 1143 other cases picked out at random from the same period gave a family history of diabetes in only 12—i.e., 1·05 per cent. A further study of his figures shows that diabetes includes at least two different groups of cases: (1) a group in which the incidence is in middle or late life, the disease comparatively mild, and the family factor absent; and (2) a group characterised by earlier incidence, more rapid termination, and a tendency to run in particular families. This affects our discussion of prognosis, for if there be a strong family history the sufferer from diabetes will probably die rapidly and before he attains middle life. Further, it appears that the hereditary factor comes out more in the male—that the death from diabetes of a father or brother is more ominous than that of a mother or sister, and that the male is more liable to suffer from family diabetes than the female. The distinction that these investigations show as to two kinds of glycosuria according to age are well known. I often wonder if the passage of a little sugar by an elderly person matters. We all know the elderly persons, men especially, whose sugar is easily controlled by diet; usually they pass no diacetic acid and have few of the symptoms of diabetes. Indeed, it is highly probable that a number of elderly men have a little glycosuria, but they go to their grave without its ever having been suspected and as far as we know without its ever having done them any harm.

I would suggest that the most important thing about the prognosis of diabetes is the effect of treatment; it is impossible to know beforehand whether a patient is going to respond easily to this. The other important thing is whether the sufferer is able to live in easy and comfortable circumstances. No doubt if diabetics are well off the ease with which they can buy suitable food is greatly in their favour, but of almost equal importance is the fact that they can give up their work and lead a quiet life. Worry is a powerful factor in precipitating diabetic coma. I know middle-aged persons who have had diabetes for 20 years and whose urine always contains some sugar and often a little diacetic acid, but then they have always been very careful to carry out the treatment ordered and to live quietly. A member of our own profession always gets considerable glycosuria when working hard, but when he takes a long holiday it always diminishes considerably and often disappears altogether.

Those who are occasionally a little drowsy must always be on their guard, but if large doses of bicarbonate of soda are given the drowsiness may entirely pass away; but, on the other hand, I doubt if persons ever recover from real coma, although alkalies may prolong life a little. Lately Dr. E. P. Poulton and others have shown that during the dyspnœa which so often precedes, and always accompanies, diabetic coma there is a considerable diminution in the CO_2 in the alveolar air. The explanation is that the blood being more acid than normal in those who are going to have diabetic coma, the increased acidity exciting the respiratory centre leads to deeper respiration and consequent washing out of CO_2 from the alveolar air, and an apparatus has been devised for easily measuring the CO_2 in the alveolar air. I have a strong suspicion that if lipæmia is very marked the outlook is bad. I need hardly remind you that gangrene, phthisis, and almost any severe illness increase the gravity of the outlook in diabetes, but it is of interest to remember that pyrexia sometimes increases the sugar and sometimes leads to its disappearance, and operations have the same variable result.

SOME GENERAL FACTORS IN PROGNOSIS.

There is another aspect of the prognosis question and it is this: that we cannot possibly tell whether a treatment is good or bad unless we know what is the natural course of the disease. Over and over again good results are ascribed to treatment quite unjustly; the patient has got well because in the natural course of the disease he would do so, treatment has had nothing to do with it. [The lecturer here gave results already published of the natural course of the disease in those who suffer from gallstones and those who suffer from exophthalmic goitre.]

In trying to estimate the prognosis in any disease we have not only to think of the natural course of the disease but the kind of patient who is afflicted by it. Time will only permit us to take three instances of this. One circumstance that makes a patient a bad life is excessive weight. The actuarial research to which I have already referred has constructed a table:—

	Ratio of actual to expected deaths.
Average normal weight	98 per cent.
From 5 to 15 per cent. overweight	114 ,,
,, 15 ,, 25 ,, ,, ...	129 ,,
,, 25 ,, 35 ,, ,, ...	136 ,,
,, 35 ,, 50 ,, ,, ...	165 ,,
More than 50 ,, ,, ...	228 ,,

Further, a study of the figures clearly shows that the mortality increases in proportion as the abdominal girth over that of the expanded chest increases; thus the expectation of life of a man who is 50 per cent. overweight and whose abdominal girth exceeds that of the chest by more than 3 inches is very bad. Among heavy people the death-rate from diabetes, apoplexy, heart disease, pneumonia, and Bright's disease was very high, while from tuberculosis it was very much lower than normal, and generally speaking the greater the weight the lower the mortality from phthisis. It must be remembered that the figures just given understate the case, for all the people from whom the figures are drawn were taken at standard rates, and as they

were heavy a rigid selection was made so that only those which appeared exceptionally healthy were insured.

It is well known that over-indulgence in alcohol greatly damages prognosis in any disease. The following ratio shows that alcoholic subjects are bad lives, as when there was one alcoholic excess or more, the last within two years of application, the ratio of actual to expected deaths was 174 per cent. Here again the case is understated, for these figures refer to lives apparently so exceptionally good that they were taken at ordinary rates in spite of the history of alcoholic excess.

Lastly, there is the mental factor. Every doctor dislikes the patient with an acute illness who is sure he will die, and likes the patient who is certain he will recover. A boy said he knew he would die as a result of an anæsthetic necessary for an operation, and he did before the operation was begun, although the anæsthetic was given by a highly skilled anæsthetist.

INCOMPLETE ROTATION OF THE INTESTINAL LOOP AS A CAUSE OF RETROCOLIC HERNIA.

WITH NOTES ON THE DEVELOPMENT OF THIS CONDITION.

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HERNIA other than that of the vermiform appendix into a retrocolic fossa is a rare condition. An analysis of the cases hitherto described is given by Moynihan,[1] according to whom many of the cases hitherto recorded cannot be regarded as authentic. He passes in review some 14 cases, and decides that but 7 of these are genuine. The interesting case described by Fürst (*vide infra*) is relegated to the doubtful category; however, it seems not improbable that it is in reality one of retrocolic hernia due to a developmental anomaly, as in some of its features it resembles the case I describe later. For a more complete understanding of this interesting form of retrocolic hernia it will be necessary first to review our knowledge of the anatomy and development of the retrocolic fossæ.

Anatomy of the retrocolic pouches of peritoneum.—The retrocolic fossæ vary considerably. Often they are both absent, and in the majority of cases only one is present. Berry[2] gives the following statistics: (1) Internal fossa alone, 15 per cent.; (2) both fossæ, 10 per cent.; and (3) external fossa alone, 5 per cent. The same authority places the retrocolic position of the appendix second in order of frequency. According to Lockwood,[3] hernia into the internal fossa is the more common. He states: "I have many times found the inflamed appendix in the fossa. ..... When the hernia is complete and the mouth of the fossa closed the greatest difficulties may arise." It is difficult to exaggerate, therefore, the importance of a knowledge of the surgical anatomy of these fossæ to the surgeon.

Having regard to the confusing nomenclature that has gathered round these fossæ, Jonnesco's nomenclature is the best because it is the simplest and most accurate. He divides them into external and internal retrocolic fossæ. The internal retrocolic fossa is best described by Lockwood and Rolleston[4] as follows: "It is bounded on the right by the mesentery of the ascending colon and on the left by the enteric mesentery. It is situated behind the angle of junction of ileum and cæcum, which have both to be lifted up to see its mouth. The fossa itself runs a varying distance upwards behind the ileo-colic junction and parallel to the ascending colon." It must be borne in mind, to avoid confusion, that they gave the term "ileo-cæcal" to the fossa under consideration—a term which is now more usually applied to the fossa between the meso-appendix and the ileo-cæcal fold. In another place (*loc. cit.*) Lockwood states that "the fossa may reach half-way up the ascending colon beyond the crest of the ilium and end close to the kidney and duodenum."

The external retrocolic fossa, first described by Treitz, separates the layers of the mesocolon, and its mouth is usually at the junction of cæcum and colon, and looks forwards and downwards. It is usually quite small, but occasionally may be as large as a finger. A retrocolic hernia due to a developmental anomaly is usually into a modification of this fossa.

Richard Berry confirms Jonnesco's work on the fossæ, and states: "When both fossæ are present three peritoneal folds are required for their formation; these are from without inwards: 1. External parietocolic fold or outer layer of the ascending mesocolon. 2. Internal parietocolic fold or inner layer of ascending mesocolon. 3. Mesenterico-parietal fold or abdominal attachment of the enteric mesentery internal to the mesocolon."

Comparative anatomy of the retrocolic fossæ.—The process of secondary adhesion of the ascending colon to the posterior abdominal wall, to be shortly described, is an adaptation to the upright position, and the retrocolic fossæ are therefore only found in orthograde primates.

Development of the retrocolic fossæ.—With regard to this there are two principal theories—viz., that they are either (*a*) primary or (*b*) secondary in origin. (*a*) The primary origin. Treitz, Gruber, and Lockwood held that during the descent of the testis the gubernaculum exerted its influence upon the cæcum as well, causing its descent into the right iliac fossa, and that this descent by dragging upon the peritoneum caused the formation of the folds bounding the fossæ. Waldeyer held that the cæcum continues to descend after the ascending colon has become fixed, and thus raises up the peritoneum in the form of two folds which bound the retrocolic fossæ. (*b*) The secondary origin. The theory of secondary formation of Toldt states that the retrocolic fossæ are due to a secondary or delayed adhesion of the ascending colon, cæcum, and ileocæcal angle to the posterior abdominal wall. This theory is probably the correct one, and it will be seen that it has an important bearing on the developmental form of retrocolic hernia.

Abstract of symptoms of retrocolic hernia.—According to Moynihan the symptoms appear rapidly and are those of sudden strangulation of the bowel—viz., severe pain in the abdomen, followed by vomiting and absolute constipation. In two of the cases there were previous abdominal symptoms. In Atherton's case the patient had complained of pain and tenderness in the right iliac region for

[1] Moynihan: Retroperitoneal Hernia.
[2] R. Berry: The Cæcal Folds and Fossæ.
[3] Lockwood: Appendicitis, its Surgery and Pathology.
[4] Lockwood and Rolleston: On the Fossæ round the Cæcum and the Position of the Appendix, with Special Reference to Ret operitoneal Hernia, Journal of Anatomy and Physiology, vol. xxvi., 1892.

some time, which led to a diagnosis of chronic appendicitis. In the case recorded by Mansell Moullin there was a history of four previous attacks similar to the one that led to operation. Diagnosis is rarely possible, although in a case of Rieux a swelling was present on the inner side of the cæcum, which was smooth and rounded and was tympanitic on percussion, and which led to a correct diagnosis.

Case of Aschoff. A coil of intestine was found in a pouch behind the cæcum and ascending colon. The ascending colon had a very long mesentery.

Case of Mansell Moullin. On passing a finger down towards the cæcum a ring was felt around some intestine. It passed inwards towards the middle line and slightly downwards. At post-mortem examination a loop of ileum was found lying in a sac behind the cæcum, communicating with the general peritoneal cavity by an opening a little more than an inch in diameter.

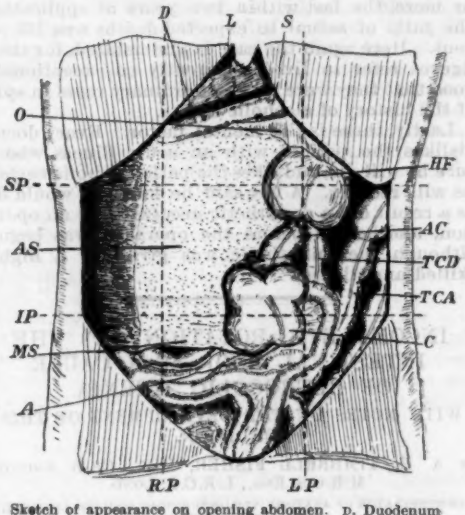
Case of Neumann. A loop of small intestine 10 cm. in length was found to be strangled in the retrocolic fossa. On lifting up the cæcum a rounded opening with sharp-edged margin was seen which would admit two fingers. This led to a peritoneal pouch extending upwards behind the ascending colon.

Case of Funkenstein. At post-mortem examination an opening was found behind the cæcum with rounded, firm edges 2 cm. in diameter. Through this the finger could be passed into a sac running up behind the cæcum and ascending colon as far as the upper margin of the ilium.

Case of Atherton. Post-mortem examination showed that the cæcum was distended and the lower two feet of ilium collapsed; at this point resection had been made. There was a pouch one inch deep with an opening of the same diameter situated to the outer side of the lower end of the cæcum and partly behind it.

Case of Fürst. This deserves a little more attention, as it has been the subject of a great deal of controversy. Fürst himself considered it a case of retrocolic hernia due to a developmental abnormality. There can be little doubt, having regard to its similarity to the case to be presently described, that he was correct. The case recorded by Fürst came to light in the body of a man aged 61, in the dissecting room. A large peritoneal sac was present occupying the right hypochondriac, right lumbar, and part of the umbilical regions. The cæcum was below the umbilicus, and it and the ascending colon were both on the inner wall of the sac. The rest of the large intestine was pushed well over into the left side of the abdomen. The sac contained two-thirds of the small intestine, the entering coil of which was jejunum just beyond the duodeno-jejunal flexure. Brösike considered that the case was one of hernia into the parajejunal fossa which is present when the jejunum is fixed in the peculiar manner described by him, and that the hernia had developed in an abnormal manner owing to a free common mesentery to the cæcum and ascending colon and to migration of the mouth of the sac. It is unfortunate that Fürst gives no full account of the duodenum and commencement of jejunum. Nevertheless, it is in all probability a case of retrocolic hernia due to incomplete rotation of the U-shaped loop of intestine.

Author's case.—This came to notice in the dissecting-room. The subject was a man, aged 75, whose death was due to senile degeneration of the heart. On opening the abdomen (see diagram) a broad, apron-like fold was seen stretching across the greater part of the right side of the abdomen. Further examination showed that the fold of peritoneum was the anterior wall of a hernial sac, and had the following boundaries. On the left side it was attached to the "hepatic" flexure of the colon, ascending colon, and cæcum. Superiorly it was attached to the lower border of the first part of the duodenum and became adherent to the right edge of the great omentum. On the right side it bulged somewhat and became continuous with the peritoneum over the right kidney and iliac fossa. Inferiorly it presented a free edge which was by no means tense, and it was devoid of any vessel. The lower free edge ran in the interspinous plane and was attached laterally to the peritoneum over the right psoas muscle, and internally to the posterior surface of the appendix and meso-appendix. The anterior wall of the sac occupied the following regions (see diagram): Lower half of epigastric



Sketch of appearance on opening abdomen. D, Duodenum (first part). L, Liver. S, Stomach. O, Great omentum. SP, Subcostal plane. AS, Anterior wall of sac. IP, Intertubercular plane. MS, Mouth of sac. A, Appendix. RP, Right latero-vertical plane. LP, Left latero-vertical plane. HF, Hepatic flexure of colon. AC, Ascending colon. TCD, Transverse colon, descending limb. TCA, Transverse colon, ascending limb. C, Cæcum.

region in its right two-thirds, right two-thirds of umbilical region, the right lumbar and hypochondriac regions, and the upper third of the right iliac and hypogastric regions.

The large intestine.—(*a*) Cæcum. The position of this was most unusual. The whole viscus was rotated and kinked, so that the posterior surface looked directly forwards and the anterior surface was in contact with and partly hid from view the ascending colon. The lower border of the cæcum thus was only separated from the hepatic flexure of the colon by a very short distance. The anterior surface of the cæcum was also in very close proximity to the middle of the transverse colon (*q.v.*) and bound down to it by a prominent peritoneal adhesion. The upper two-thirds of the cæcum occupied the lower and left quadrant of the umbilical region; the lower third occupied the upper left quadrant of the hypogastric region (see diagram).

(*b*) Appendix. Occupied the upper left quadrant of hypogastric region; pointed downwards and backwards, but chiefly inwards, so that the tip exactly reached the mesial plane a third of the distance between the symphysis pubis and intertubercular plane. Length 3 cm. Meso-appendix reached the tip and was thick and fatty.

(*c*) Ascending colon. Commenced at the points of intersection of the central plane and the intertubercular plane, and ran upwards and to the left to the hepatic flexure. Length 2·2 inches; it was adherent to the post-abdominal wall, and had attached to its right side the above-mentioned fold.

(*d*) Hepatic flexure. The intersection of the left lateral vertical and subcostal planes occurred in the centre of this, which therefore occupied the adjacent parts of the following regions—epigastric, left hypochondriac, umbilical, and left lumbar zones.

(*e*) Transverse colon consisted of two limbs, a descending and an ascending. The descending ran from the hepatic flexure following the left lateral plane as far as the brim of the pelvis; the ascending limb passing upwards and outwards

in the left iliac and lumbar regions to splenic flexure. The kink in the transverse colon lay over the brim of the pelvis and was connected to the anterior surface of the cæcum in the aforementioned way. The mesentery of the transverse colon was not connected with the posterior layers of the great omentum, but was connected by somewhat loose adhesion to the mesenteries of the descending and iliac colon.

(*f*) Descending and iliac colon. Each pursued a fairly normal course, but there was a mesentery common to both attached near the middle line to the posterior wall of the abdomen.

(*g*) The great omentum had the usual attachments but was pushed over into the left side of the abdomen and ended in a long pointed process.

(*h*) Liver and stomach were normal in their position.

Appearances on opening the sac.—On opening the sac it was seen to extend upwards beneath the right lobe of the liver, and it was seen at once that the condition was due to a developmental abnormality. On the floor of the sac could be seen the root of the mesentery, which was attached along an oblique line stretching from the junction of the first and second parts of the duodenum downwards and to the left to the termination of the ileum. Its length was about 6 inches. Some 5 feet of small intestine, presenting a perfectly normal appearance, were also found in the sac. The second part of the duodenum, which was also in the floor of the sac, had a continuation of the mesentery attached to its left side, but was adherent behind to the posterior abdominal wall in a fairly normal way. The third part of the duodenum was freely movable, having a common mesentery with small intestine from which it was indistinguishable. It was not crossed by the superior mesenteric artery, neither was there any trace of a duodeno-jejunal flexure. The whole length of the small intestine was only 9½ feet.

Developmental considerations.—At an early stage of development the intestine is a straight tube of nearly uniform calibre attached to the posterior abdominal wall by a continuous mesentery. The growth of the liver and intestine causes the mid-gut—i.e., that portion between the entrance of the common bile-duct into the duodenum and the splenic flexure—to form a U-shaped loop, which is forced through the widely open umbilicus into the umbilical cœlom. To the convexity of the loop is attached the vitelline stalk, which may persist as a Meckel's diverticulum. The mesentery of the loop is continuous anteriorly with the dorsal mesogastrium and posteriorly with the hind-gut mesentery. Running in the loop mesentery is the superior mesenteric artery, which divides the mesentery into a pre-arterial and a post-arterial part. This condition may be seen at the fifth week. The pre-arterial part of the mesentery is destined to form the greater part of the mesentery of the small intestine; the post-arterial part forms the mesentery of the ascending and transverse colon and the lower part of the mesentery proper. At the seventh week a rotation of the U-shaped loop occurs round the axis of the superior mesenteric artery, so that the distal limb of the loop, which is destined to become the ascending and transverse colon principally, comes to lie in front of the proximal limb from which the greater part of the small intestine is formed. This process goes on to such an extent that the rapidly growing proximal limb sweeps under the distal limb and comes to lie on its left side. Just before rotation commences an evagination appears on the distal loop which is the first rudiment of the cæcum, and when the process is completed this organ lies in the right hypochondrium under the liver. The rotation brings the transverse colon against the duodenum and its mesentery, in which lies the head of the pancreas. The pressure causes the duodenal mesentery to adhere to the posterior abdominal wall, and the duodenum and pancreas become fixed, so that the superior mesenteric artery comes to lie in front of the third stage of the duodenum. The continued growth of the small intestine presses the descending and iliac colon with their mesenteries against the peritoneum of the posterior abdominal wall, and secondary adhesion takes place between them, so that normally these parts of the large intestine have no mesentery.

Application of these facts to the case under consideration.—In all probability rotation of the U-shaped loop ceased at the point where the distal limb lay in front of the proximal limb. Secondary adhesion of the distal limb—the future ascending colon—to the peritoneum of the posterior abdominal wall occurred early and imprisoned the proximal limb of the loop from which the greater part of the small intestine is formed. Thus the cæcum was prevented from swinging upwards and to the right to its position beneath the liver. The small intestine developed towards the right chiefly, and in its growth pushed the large intestine to the left side of the abdomen. The peritoneum connecting the right part of the posterior surface of the ascending colon to the posterior abdominal wall (right layer of ascending mesocolon or right parietocolic fold) became greatly stretched and formed the anterior wall of the sac. The abnormal position in which the small intestine developed accounts for its extreme shortness and also explains why the descending and iliac colon have both a mesentery. The form of the duodenum, the presence of its mesentery, the absence of the duodeno-jejunal flexure, and the position of the superior mesenteric artery all show that rotation stopped at the above-mentioned stage. The conclusion is, therefore, that this form of hernia is due to an abnormality of development occurring at a very early stage.

My thanks are due to Professor Edward Fawcett for kind suggestions during the preparation of this article.

HÆMORRHAGIC TYPHOID FEVER.

BY ADRIAN CADDY, M.D., B.S. LOND., F.R.C.S. ENG.;
AND
BARRÉ MOLONY, M.B., CH.B. EDIN., F.R.C.S. EDIN.

DURING the past two years we have had under our care three interesting cases of typhoid fever, two of the cases developing very unusual symptoms. In the first case during the course of the fever there developed an extensive purpuric eruption, which was followed by a generalised bleeding from the mucous membranes—viz., the tongue, gums, bladder, and intestines. In the second case hæmatemesis occurred while the fever was at its height. This happened on three occasions, together with bleeding from the bowel. The third case was one of intestinal hæmorrhage complicating typhoid fever and ending in recovery. All these cases occurred in private among Europeans who, while not new to the country, yet had not resided in India for more than a few years and were living under good conditions. The following are the clinical histories of the cases.

CASE 1.—The patient, a European aged 38, came to our consulting-rooms one evening (Sept. 28th, 1912), complaining of fever and saying that he had been ill with fever for about a week at Dacca. We examined him, found his temperature was 104° F., sent him to bed in the hotel where he was staying, and put him on large doses of quinine, 30 grains daily. As he did not improve we removed him to a nursing home two days later. His

fever continued high, varying from 102° to 104°, but otherwise there was no point of special interest. The quinine was discontinued after he had taken 30 grains daily for a week, as it had not had any influence on the fever. This course of quinine excluded the possibility of any malarial infection. The blood was now tested by the health department of the corporation, and Widal's reaction for typhoid fever proved positive. On Oct. 5th some bleeding from his gums was noticed. On the 6th a purpuric eruption started on his legs and gradually spread all over his body, the spots remaining discrete and varying in size from a pin's head to that of a pea. The spots kept on coming out until his death. On the 7th a hæmorrhage occurred into his bladder. This bleeding was so severe that clots formed and the bladder was washed out to get rid of them. On the 9th there was a big hæmorrhage from the bowel. A small pin-point on the dorsum of the tongue started oozing freely. On the 10th there were further hæmorrhages from the gums and intestines, and he gradually sank and died the next day.

CASE 2.—The patient, aged 30, a European overseer employed in a jute mill eight miles from Calcutta, was admitted by us into a nursing home with the following history. He had been suffering from fever since Sept. 16th, 1912, but continued his work until the 22nd, the day he saw us. In the nursing home the fever continued, varying from 101° to 103° F., and was uninfluenced by quinine in quantities of 30 grains daily continued for a week. The blood was tested and Widal's reaction for typhoid fever found positive. The temperature touched normal on Oct. 7th, the pulse having varied from 70 to 90 during this period. The temperature remained intermittent for a few days, and then commenced rising again, reaching 104° on the evening of the 11th. Quinine was again started in doses of 20 grains daily without effect. On the 14th the temperature dropped to 100°, and the pulse rose to 120 per minute; this was followed by his bringing up a large amount of blood. It was a little uncertain whether it was vomited or coughed up. On the 15th he brought up more bright red blood; this time there was no doubt that he vomited it; also he passed bright red blood by the bowel. This vomiting and passing of blood continued during the next two days, the temperature varying from 100° to 104°. He died on the 18th, after another large hæmorrhage from the bowels.

CASE 3.—The patient, a European aged 24, an employee in a jute mill, was admitted into a nursing home under our care on March 30th, 1914, with a history of having suffered from fever for six days. When we saw him his temperature was 104° F. During the next two weeks it varied from 101° to 103·5°. We gave him quinine in quantities of 30 grains daily for five days, and then stopped it, as the temperature was going up and the quinine seemed to be causing diarrhœa. On the twelfth day of the fever Widal's reaction for typhoid fever was positive. His fever continued steadily with some diarrhœa for 22 days. The temperature then shot up to 105·6°. Sponging rapidly brought this down to 102°. In the course of a few hours his temperature fell to normal, and this was followed by a hæmorrhage from the bowel. These bowel hæmorrhages occurred on five occasions during the next four days and his condition became very serious. Then he gradually took a turn for the better. The temperature in the course of ten days came to normal. The diarrhœa ceased, the bowels became constipated and had to be relieved by enema. His temperature has now (June 10th) been normal for three and a half weeks; he is sailing for Japan in a day or so for a sea voyage to complete his recovery.

Remarks by Dr. CADDY.—It will be noted that in each case the patient was forthwith put on to a course of quinine. Although malaria is uncommon in Calcutta, still two of the cases developed their fever at the period of the greatest incidence of malaria in the year—viz., September. None of the cases actually resided in the city of Calcutta, two of them living eight miles outside, and one coming from Dacca, over 100 miles away, where malaria is much more prevalent.

It is very uncommon for Europeans living in the English quarter of Calcutta to get infected by malaria. Europeans who perform all their service in Calcutta without ever living in other parts of India generally escape malarial infection. One might say that all cases of fever coming from the country districts are put on a course of quinine forthwith. It is uncommon to find malarial parasites in Europeans; so habitually do they dose themselves with quinine for slight colds and chills, that the parasites are driven out of the peripheral circulation. The quinine is given in doses of 30 grains daily in solution for five days. If the temperature has not fallen to normal in that time, one may exclude the probability of malarial infection. The dose of quinine required to reduce a malarial temperature to normal was worked out some seven years ago at the General Hospital, Calcutta. It was found that if only 20 grains daily were given to an uncomplicated case of malaria the fever took a week to abate. If, however, 30 or 40 grains were given daily the temperature came down to normal in four days. A still further increase in the dose to 60 grains daily did not shorten the period any further, and in addition was in the danger zone of quinine blindness.

This quinine treatment in cases which eventually prove to be typhoid often seems to me to aggravate the disease. The headache is made worse, the stomach is often irritated, and diarrhœa is brought on. But one is on the horns of a dilemma. If suspicions are correct and the case turns out to be typhoid all is well. On the other hand, one must bear in mind that the common malarial infection is malignant tertian. I once saw an English army officer die through omission to give quinine. The patient had fever; the blood was examined by his medical attendant and no parasites found. Three days latter he became comatose; parasites were then found in large numbers in his blood by another medical man. In spite of quinine solution being given intravenously he died.

As regards purpura complicating typhoid and hæmorrhagic typhoid fever we have been able to find very few references in current literature. Sir Thomas Barlow[1] has described a case of typhoid fever with extensive purpura, some of the mucous membranes being affected. The patient passed into a state of coma lasting 48 hours, but subsequently recovered. She died later from a relapse of the fever, and there was found a large hæmorrhage in the subarachnoid space, also hæmorrhages into the mediastinum and retroperitoneal tissues. The best description of a case of hæmorrhagic typhoid fever is given by Goodall.[2] His case is very similar to our own. His article contains several references to the current literature on the subject. In his own experience of 1733 cases in 11 years at the Eastern Fever Hospital, Homerton, he only saw one marked case. In 14 other cases hæmorrhage other than intestinal had occurred, affecting the fauces, nose, pleura, lungs, conjunctiva, mesentery, and uterus. All but 3 of the 15 cases died. Hence he thinks that a purpuric or petechial eruption is of grave import in typhoid fever.

In THE LANCET[3] is quoted a paper by Pissavy and Gauchery, of Paris, describing a case of typhoid fever complicated by acute hæmorrhagic nephritis. These authors found records of five similar cases in the "Thèses de Paris." McCrae[4] in a series of 1500 cases at the Johns Hopkins Hospital had only

[1] Barlow: Royal Society of Medicine, vol. i., p. 122, Clinical Section.
[2] Goodall: Clinical Society's Transactions, vol. xxxvi., 1903, p. 135.
[3] THE LANCET, 1911, vol. i., p. 180.
[4] McCrae: Osler and McCrae, System of Medicine.

3 cases of hæmorrhagic typhoid fever—that is to say, cases in which bleeding occurred from various parts of the body. In this same series purpuric spots were noted in 38 cases. In the majority of these rose spots first appeared which later became hæmorrhagic. In 9 of these cases the rash was regarded as hæmorrhagic, 3 of them being the hæmorrhagic type noted before.

Remarks by Dr. MOLONY.—In discussing the question of treatment (other than dieting and nursing) of these cases one must think of them as examples of two different types of hæmorrhage as it occurs in the course of typhoid fever—viz., (1) due to widespread damage to vessels in different parts of the body; and (2) due to gross damage by ulceration to one or more vessels in the gut. Case 1 is an example of the first type; Cases 2 and 3 are examples of the second type. The aims of treatment (we are not discussing prevention) are, first to stop the bleeding, and secondly to make up for the loss of body fluids.

To stop the bleeding the first essential is to rest the bleeding part. This, as in the third case, may be obtained by administering opium, in the form of pil. plumbi c. opio, 4 grains every three hours. The coagulability of the blood may be increased by giving calcium salts. A patient on three pints of milk per diem has a daily intake of about 100 grains of calcium salts, chiefly in the form of phosphate, in the 24 hours—an amount sufficient, one would think, for his needs. In the second case the hæmorrhages were so sudden and profuse and came from so high up the intestinal tract, possibly from the stomach, that drug treatment was unlikely to be successful. In all future cases one would certainly use emetine hydrochloride as advocated by Low,[5] who reports success from its use in cases of bleeding from cancer of the rectum and from gastric ulcer. In the first case a different line of attack is obviously necessary, but the attack is even more of a forlorn hope than in the other type of case. There seems as little hope of checking the bleeding in this type of case as there is in stopping the hæmorrhage in the last stages of acute lymphatic leukæmia, a condition which Case 1 resembles. One might try normal horse serum, but there is little hope of success.

To make up for loss of body fluids it seems logical that one should transfuse these cases of the second type, and hypertonic saline, as likely to help in increasing the coagulability of the blood, would be the fluid of choice. Against transfusion it may be said that Case 3 made a rapid and complete recovery without it. One doubts very much whether any transfusion could have saved Case 2, so rapid and profuse was the hæmorrhage. As for transfusion in Case 1, the bleeding here seems rather the expression of a profound toxæmia and was merely a contributory cause to the fatal issue, whereas in the other cases the actual loss of body fluid was the chief feature to be combated. In the third case it is interesting to note that a dose of antityphoid vaccine was given the day before the fever started. It is difficult to say whether this influenced the result one way or another.

Calcutta.

[5] Low: Recent Researches on Emetine, Royal Society of Medicine, Therapeutical and Pharmacological Section, p. 48, March, 1914.

SOUTH-WEST LONDON MEDICAL SOCIETY.—The twenty-first annual dinner of this society will take place at the Waldorf Hotel, Aldwych, on Wednesday, Oct. 7th, at 7.45 for 8 P.M. The honorary secretary is Mr. Robert F. Chance, 34, West-side, Wandsworth Common, S.W.

ORAL SEPSIS IN THE DIAGNOSIS AND TREATMENT OF PULMONARY TUBERCULOSIS.

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THE results of the first year's coöperation between the dental and tuberculosis departments at St. Thomas's Hospital have been sufficiently encouraging to make me think them worth recording. Every tuberculosis officer knows the trouble of the doubtful case with its suspicious but indefinite history of loss of weight, occasional irregular pyrexia, cough, and expectoration of muco-purulent sputum, repeated examinations of which fail to demonstrate the presence of tubercle bacilli. The physical signs in the chest, as also the X ray findings, may be suggestive, but at the same time not conclusive of pulmonary tuberculosis, while the complement-fixation test and experimental inoculation of the patient's sputum require some time for their completion; meanwhile the patient, in spite of general tonic and hygienic treatment, may show no signs of improvement, and the original problem, "Is this or is this not a case of early pulmonary tuberculosis?" remains unsolved. Further, one may have the uncomfortable feeling that the time and money of the tuberculosis department are being spent upon patients who are in reality non-tuberculous. It is true the facilities afforded by observation beds often assist the officer in arriving at a proper diagnosis by more careful clinical observation or by the employment of diagnostic injections, but it must be remembered that not only are the doubtful cases too numerous for the application of these procedures, but also many dispensaries are not equipped with observation beds at all. Early diagnosis is important if the disease is to be cured or arrested, but at present no specific method has been discovered whereby the early diagnosis can be made with certainty.

I have found, and I expect many have made a similar discovery, that the routine examination and treatment by an experienced dental surgeon of the mouth of all dispensary patients is not only of value in the treatment of chronic pulmonary tuberculosis, but is also of considerable use in eliminating numbers of doubtful cases. A clean mouth is the exception among the poor, although many of this class, it is true, enjoy good health in spite of the constant septic absorption thereby entailed. But once infection by a chronic debilitating disease such as tuberculosis has occurred, oral sepsis undoubtedly plays a large part in dealing with, and perhaps altogether preventing the acquisition of, that high degree of resistance by which alone a cure can be effected. Chronic cases with a tendency to relapse who have had full sanatorium treatment require the greatest care and the best environmental conditions if the working capacity, which after all is of essential importance, is to be maintained; untreated oral sepsis under these conditions may frequently turn the balance adversely for the patient.

The number of cases dealt with during the year in the tuberculosis department of St. Thomas's Hospital is hardly large enough to allow of definite conclusions being drawn as to the efficacy of the radical treatment of oral sepsis in chronic pulmonary tuberculosis, but it is sufficient to give an indication which may be worth while following up.

It will be noticed that out of the 41 cases collected 21, or roughly 50 per cent., were diagnosed as ? pulmonary tuberculosis—that is to say, they were sent to the dispensary as tuberculous patients, and though the diagnosis could not be definitely proved it is probable that in some of the cases at any rate it was correct. This being so, seeing that all these patients had severe degrees of oral sepsis, the supposition arises that oral sepsis may play an important part in determining the reaction to infection by the tubercle bacillus. For in an overwhelming majority of cases a man with a clean mouth must be in a better state of health than a man with a dirty one, and perfect health is our greatest asset when we have to deal with tuberculous infection.

The coöperation between the two departments mentioned above is not so easy in actual practice as it sounds. The first difficulty is to get the patient to see the dentist at all. This can best be got over by arranging for the dental surgeon to examine the patients in the dispensary at the time of their ordinary attendance to receive medical treatment. If this is not done it is generally found that nothing short of raging toothache will induce the patient to have his teeth seen to. The second difficulty consists in persuading the patient to submit to the treatment advised, and is less easily surmounted. The ordinary patient employs two criteria and two only in judging of the soundness or otherwise of his teeth, and if they both enable him to bite his food and cause him no pain he supposes them to be healthy. One can hardly be surprised, therefore, if he hesitates to have what he believes to be healthy teeth extracted in bulk for a condition of his gums which he can neither understand nor appreciate. Sternness in refusing all treatment until the oral condition has been dealt with is the best method of overcoming this difficulty, while a great deal can be done by getting patients who have derived benefit from the removal of their teeth to talk to the more refractory cases.

TABLE I.—*Cases of Chronic Pulmonary Tuberculosis which showed Improvement.*

No.	Age and sex.	Diagnosis.	Condition, and how treated.	Result.	Weight, how affected.
1	33, F.	C.P.T.*	Pyorrhœa. Septic teeth removed.	Improved.	Gained 3 lb.
2	45, M.	C.P.T.	Pyorrhœa. All removed.	Marked improvement.	No gain.
3	50, F.	C.P.T.	Pyorrhœa. All removed.	Marked improvement.	Gained 5 lb.
4	49, F.	C.P.T.	Pyorrhœa. All removed.	Marked improvement.	,, 6 lb.
5	40, M.	C.P.T.	Pyorrhœa. All removed.	Improved and restarted work.	No gain.
6	45, M.	C.P.T.	Pyorrhœa. Septic roots removed.	Improved.	Gained 3 lb.
7	55, M.	C.P.T.	Pyorrhœa. All removed.	Improved and restarted work.	No gain.
8	25, F.	C.P.T.	Pyorrhœa. All removed.	Marked improvement.	Gained 1 st.
9	29, M.	C.P.T.	Pyorrhœa. Some removed. (Sanatorium.)	Improved.	,, 7 lb.
10	28, M.	C.P.T.	Pyorrhœa. All removed. (Sanatorium.)	Improved.	,, 4 lb.

* C.P.T. = Chronic pulmonary tuberculosis.

In Table I. are the cases of undoubted pulmonary tuberculosis which improved after the removal of oral sepsis. The disease in all cases was of the chronic type. Two, Nos. 9 and 10, had sanatorium treatment, so that their improvement as the result of dental treatment is not proven. In the other 8 cases there was well-marked improvement, and Nos. 7 and 5, though they did not gain weight, both became well enough to resume the work which

TABLE II.—*Cases of Chronic Pulmonary Tuberculosis which showed no Improvement.*

No.	Age and sex.	Diagnosis.	Condition, and how treated.	Result.
1	32, M.	C.P.T.*	Pyorrhœa. All removed. (Pulmonary tuberculosis active.)	Worse.
2	35, F.	C.P.T.	Pyorrhœa. All removed. (Pulmonary tuberculosis active.)	Died.
3	41, F.	C.P.T.	Pyorrhœa. All removed. (Pulmonary tuberculosis active.)	Unaltered.
4	28, F.	C.P.T.	Septic roots removed.	,,
5	35, F.	C.P.T.	Pyorrhœa. All removed.	Worse.
6	35, F.	C.P.T.	,, ,, ,,	Unaltered.
7	42, F.	C.P.T. Lupus.	,, ,, ,,	,,
8	33, M.	C.P.T. Subacute.	Pyorrhœa. All removed. (Sanatorium. Pulmonary tuberculosis active.)	Worse.
9	21, F.	C.P.T.	Pyorrhœa. All removed.	Unaltered.
10	36, F.	C.P.T.	Septic roots removed.	No marked improvement.

* C.P.T. = Chronic pulmonary tuberculosis.

TABLE III.—*Cases of (?) Chronic Pulmonary Tuberculosis which showed Improvement after Radical Treatment for Oral Sepsis.*

No.	Age and sex.	Diagnosis.	Condition, and how treated.	Result.	Weight, how affected.
1	30, M.	? C.P.T.*	Pyorrhœa. All removed.	Discharged well.	Gained 8 lb.
2	30, F.	General debility. ? C.P.T.	Pyorrhœa. All removed.	Discharged well.	,, 3 lb.
3	30, F.	General debility. ? C.P.T.	Pyorrhœa. All removed.	Discharged well.	No gain.
4	33, F.	? C.P.T.	Pyorrhœa. All removed.	Marked improvement.	Gained 12 lb.
5	27, M.	? C.P.T.	Pyorrhœa. All removed.	Marked improvement and restarted work.	,, 4 lb.
6	35, M.	? C.P.T. B. & E.†	Pyorrhœa. All removed.	Marked improvement.	No gain.
7	37, F.	Chronic broncho-pneumonia.	Pyorrhœa. All removed. Influenza vaccine ? due to teeth ‡	Marked improvement.	,,
8	35, F.	? C.P.T.	Pyorrhœa. All removed.	Improved.	,,
9	30, F.	? C.P.T.	Pyorrhœa. All removed.	Improved. Ceased to attend.	,,
10	47, F.	? C.P.T.	Pyorrhœa. All removed.	Improved. Ceased to attend.	Gained 4 lb.
11	30, M.	General debility. ? C.P.T.	Pyorrhœa. All removed.	Improved. Started work again.	,, 3 lb.
12	47, M.	B. & E. ? C.P.T.	Pyorrhœa. All removed.	Marked improvement.	,, 8 lb.
13	37, F.	Bronchitis. ? C.P.T.	Pyorrhœa. All removed.	Quite well.	,, 1st. 2lb.
14	35, F.	Pleurisy. ? C.P.T.	Pyorrhœa. All removed.	,,	,, 1 st.
15	39, F.	? C.P.T.	Pyorrhœa. All removed.	Marked improvement.	,, 3 lb.

* C.P.T. = Chronic pulmonary tuberculosis.
† B. & B. = Bronchitis and emphysema.
‡ Did not improve till date of vaccine commencement.

they had given up some months previously—a more important criterion of improvement than weight.

Table II. shows the cases of undoubted pulmonary tuberculosis which did not improve after the mouth was cleaned. Six out of the 10 cases remained unaltered. In 4 the steady progress of the disease was in no way arrested. In these 4 cases the disease was active. In no case did dental treatment appear to have a definitely bad effect on the patient.

Table III. shows 15 cases of doubtful pulmonary tuberculosis which improved after radical treatment for oral sepsis. Perhaps none of these cases were tuberculous. Most of the patients have been discharged well or have ceased to attend of their own accord. One of the most striking cases was No. 13. This woman had been under treatment for years at different institutions, her case always being diagnosed as "? pulmonary tuberculosis." No. 7 should, perhaps, not be included in this list. This patient was suffering from a chronic influenzal infection, and though her mouth was in a very bad state and was cleaned, there was no improvement until the case was treated with a vaccine of the influenza bacillus which was isolated in pure culture from the patient's sputum.

TABLE IV.—*Cases of Doubtful Pulmonary Tuberculosis which did not show Improvement after Dental Treatment.*

No.	Age and sex.	Diagnosis.	Condition, and how treated.	Result.
1	33, F.	? Syphilis. ? C.P.T.*	Pyorrhœa. All removed.	No marked improvement.
2	33, F.	Chronic bronchitis.	,,	No improvement.
3	40, F.	? C.P.T.	,,	,,
4	45, F.	? C.P.T.	,,	,,
5	22, F.	? C.P.T.	,,	,,
6	30, M.	General debility. ? C.P.T.	,,	,,

* C.P.T. = Chronic pulmonary tuberculosis.

Table IV. is a list of the cases of doubtful pulmonary tuberculosis which did not show any improvement after dental treatment. These patients may be those who are really tuberculous.

The numbers in Tables III. and IV.—viz., out of 21 patients 15, or 74 per cent. roughly, showing well-marked improvement—have been sufficiently encouraging to lead me to turn my attention more thoroughly this year to the eradication of oral sepsis in my patients with already increasing good results.

Last year 150 cases were examined and treated by the dental surgeon in the department, but in this article I have only dealt with those cases in whom the report was "Sepsis; advised removal of all," and on whom the treatment was fully carried out. My thanks are due to Mr. R. McKay and his assistant, Mr. W. H. Dye, who have given such an immense amount of time and trouble to the dental treatment of my cases.

LIVERPOOL SCHOOL OF TROPICAL MEDICINE.—The chairman, Mr. F. C. Dawson, and committee, of the Incorporated Liverpool School of Tropical Medicine, have issued invitations to a luncheon at the Adelphi Hotel, Liverpool, on Thursday, July 23rd, at 1 P.M., to meet Sir Thomas Barlow, President of the Royal College of Physicians of London, on the occasion of the opening of the Sir Alfred Jones Tropical Ward of the school. The ceremony will be performed at the Royal Infirmary by the Countess of Derby at noon.

AURICULAR FLUTTER FOLLOWED BY PAROXYSMAL AURICULAR FIBRILLATION.

BY E. B. GUNSON, M.D. EDIN., M.R.C.P. LOND.

(*From the Cardiac Department, London Hospital, E.*)

AURICULAR flutter is a condition in which the normal auricular contractions are replaced by rhythmical contractions arising at a greatly increased rate from an abnormal focus in the auricle. Some degree of heart block is usually present, the ventricle responding in many cases to alternate auricular impulses; in other cases the response is less frequent. A varying block may result in an irregular pulse.

In auricular fibrillation the auricular contractions are replaced by a continuous fibrillary movement of the auricle. The ventricular response is haphazard and gives rise to complete irregularity of the pulse.

By means of the electrocardiograph it is easy to recognise these two conditions. The contracting heart muscle gives rise to an electric current, which is conveyed to a string galvanometer by means of two wires connected with the patient's body. The current produces deflections of the string, which are recorded on a moving photographic plate. From this plate the electrocardiogram is printed. In the illustrations the rise P corresponds to the auricular systole, the rises R and T to the ventricular systole. The P–R interval, the measure of the time occupied by the passage of the impulse from the auricle to the ventricle, is normally less than one-fifth of a second.

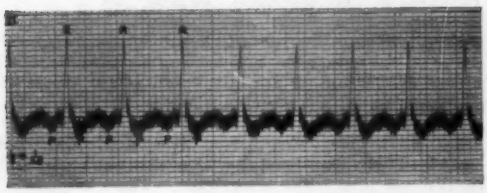
In all probability the majority of cases of paroxysmal tachycardia are due either to auricular flutter or to auricular fibrillation. The present case is an illustration not only of this fact, but it also shows the close relationship which exists between the two conditions.

The patient, aged 68, was admitted to the London Hospital on August 25th, 1913, under the care of Dr. James Mackenzie. Fifty-two years ago, when aged 16 years, he had an attack of acute rheumatism and was an in-patient of St. Bartholomew's Hospital. Four years later, when aged 20, he had a second attack of acute rheumatism and was an in-patient of the London Hospital. On discharge he had a systolic murmur at the base, but no other abnormal physical signs. Forty years ago, when aged 28, he had ague. For the past 25 years he had suffered from a winter cough, which had become more severe in recent years. Six years ago, when aged 62, he had pneumonia. He had been unable to work for four years owing to præcordial pain, which was readily induced by exertion and accompanied by a "choking sensation." General weakness and shortness of breath had gradually developed during the same period. For 15 months he had been subject to severe anginal attacks. The pain, which was accompanied by a tightness in the chest and a feeling of suffocation, affected the upper part of the chest, especially the second left interspace, and extended down the inner side of the left arm to the ring and middle fingers.

On August 5th, 1913, an electrocardiogram showed a normal rhythm and a rate of 105 per minute. On the 11th the patient complained particularly of attacks of pain in the chest. His colour was good; there was no œdema. The apex beat was not palpable. Deep cardiac dullness extended an inch to the right and 5 inches to the left of the middle line. A systolic murmur was present at the mitral, aortic, and tricuspid areas. The rhythm was not noted. The liver dullness extended 3 inches below the costal margin. On the 25th the patient complained that the pain had persisted, had increased in severity, and had interfered with sleep. He was pale and dyspnœic, and had

an anxious expression. He was at once admitted to the ward. The radial pulse was regular, with a rate of 155 per minute. An electrocardiogram showed the presence of auricular flutter, with 2:1 heart block. (See Fig. 1.) The apex beat was palpable in the sixth space, 6 inches from the mid-line. Deep cardiac dullness extended 1½ inches to the right and 6 inches to the left of the mid-line. The heart sounds were present and unaccompanied by murmurs. There was dullness at the base of the left lung; crepitations were present at both bases; rhonchi were general. The liver

FIG. 1.

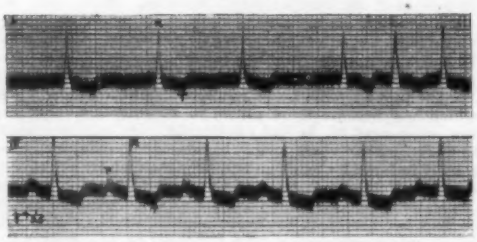


Electrocardiogram, Oct. 30th, 1913. Auricular flutter with 2:1 block. Auricles 320 per minute. Ventricles 160 per minute. The rise P indicates the auricular systole and the rises R and T the ventricular systole.

extended 4½ inches below the costal margin. There was no œdema. The urine contained a thick cloud of albumin. The Wassermann reaction was positive.

Course.—Polygraphic tracings were taken daily and electrocardiograms were taken when the nature of the rhythm was doubtful. Respirations numbered 20 to 30 per minute. The quantity of urine varied from 30 to 70 ounces per diem, the large amount being recorded after digitalis administration. The albumin diminished in amount and disappeared before discharge. The temperature remained normal and subnormal throughout. For several days after admission the patient's symptoms of distress persisted and he occasionally had Cheyne-Stokes respiration. Deep cardiac dullness and liver dullness increased slightly. On Sept. 1st digitalis was given for the first time. On the 4th, 10 days after admission, coincident with the onset of auricular fibrillation, the patient was distinctly more comfortable. He had then taken 2½ drachms of tincture of digitalis. After this date paroxysms of auricular fibrillation were frequent. The patient did not know when the changes in rhythm occurred, and they were not accompanied by any definite change in the other physical signs, but he was more

FIG. 2.



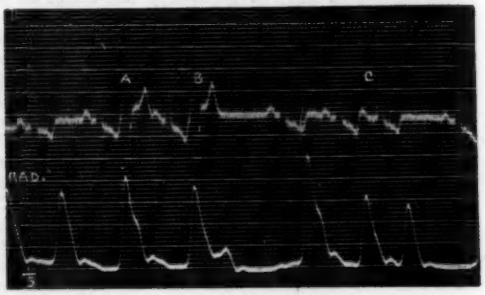
Electrocardiogram, Sept. 25th, 1913. Lead I.: Auricular fibrillation, approximately 96 per minute. Showing the absence of the rise P. Lead III.: Normal rhythm, 92 per minute. P = Auricular, R-T Ventricular systole. (Lead III. was taken immediately after Lead I.)

comfortable when the rhythm was normal or when auricular fibrillation was present than during the paroxysms of auricular flutter.

The patient was discharged on Nov. 30th, 1913. Before this he was able to walk about the ward with but slight shortness of breath. There was no œdema and no ascites. Deep cardiac dullness extended 1½ inches to the right and 4½ inches to the left of the mid-line, compared with 1½ inches and 6 inches on admission. Liver dullness extended 2 inches below the costal margin, as compared with 4½ inches on admission. The pulse-rate was 87 per minute and the rhythm normal.

Changes in cardiac rhythm.—During his stay in hospital from Oct. 25th until Nov. 30th the patient showed a great variety of cardiac irregularities. There were two paroxysms of tachycardia due to auricular flutter. The first attack continued from August 25th until Sept. 4th, the second from

FIG. 3.

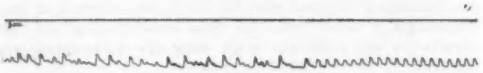


Electrocardiogram, with radial tracing, Sept. 17th, 1913. A, Premature and interpolated ventricular contraction. B, Premature ventricular contraction. C, Premature auricular contraction.

Oct. 28th until Oct. 31st. There were two paroxysms of tachycardia, with a radial pulse-rate of 150 per minute, during which auricular flutter was suspected, but of which conclusive records were not obtained. There were 13 paroxysms of auricular fibrillation, the offset of two paroxysms being recorded. (See Fig. 2.) The first paroxysm was the longest and continued for nine days; the shortest lasted for three and a half hours. Premature auricular contractions, premature ventricular contractions, and interpolated extra-systoles all occurred when the rhythm was otherwise normal. (See Fig. 3.) Alternation of the pulse was frequently present during flutter and also during periods of normal rhythm. The various changes which occurred in the heart's rhythm, and their relation to digitalis administration, are shown in the accompanying table.

On Dec. 4th, four days after discharge, the severe thoracic pain returned, extending down into both arms, especially the left, leaving the fingers numb. The pain persisted; it was accompanied by shortness of breath, and soon followed by œdema of the legs. On examination at his home on the 17th the patient was dyspnœic and in great pain. There was moderate œdema of the legs. The liver extended 4 inches below the costal margin. The heart

FIG. 4.



Radial tracing, Sept. 25th, 1913. Offset of auricular fibrillation. Rate during auricular fibrillation approximately 110 per minute. Rate during each of five successive periods of six seconds, after the onset of normal rhythm, 88, 90, 92, 94, and 92 per minute.

sounds were distinct at all areas; no murmurs were heard. A radial tracing showed a regular rhythm of 140 per minute. Pulsus alternans was present. On the 26th the patient was again seen at his home. Thoracic and abdominal pain had been very severe since the last visit. The heart sounds were unchanged. Radial tracings only were obtained and showed a regular rhythm of 136 per minute, with pulsus alternans. No irregularity of the pulse was noted by the medical attendant at subsequent visits. The patient became gradually worse and died on Jan. 1st, 1914. No necropsy was obtained.

Summary.—A fatal case of myocardial failure has been described in which auricular flutter gave

Date.	Digitalis.	Instrumental records.	Radial pulse.	Rhythm.
1913.			Per min.	
Aug. 5	None.	Electrocardiographic.	105	Normal.
Aug. 25 to Sept. 1.	,,	E.C.*	150-160	Auricular flutter; 2 : 1 block.
Sept. 1.	5 ss. tr. dig.	—	—	—
,, 2-3.	3i. tr. dig.	Polygraphic.	160-170	Auricular flutter; 2 : 1 block.
,, 4.	3i. tr. dig.	Polygraphic. E.C.	100	Auricular fibrillation.
,, 6-9.	3i. tr. dig.	Polygraphic.	65-75	,,
,, 11.	None.	Polygraphic. E.C.	66	,,
,, 12.	,,	Polygraphic. E.C.	82	Normal.
,, 17-24.	,,	Polygraphic. E.C. (See Fig. 3.)	75-80	Normal. Numerous premature contractions, auricular, ventricular, and interpolated.
,, 25—10.30 A.M.	,,	No tracing.	100	Normal.
2 P.M.	,,	Polygraphic. E.C.	110	Auricular fibrillation.
3 P.M.	,,	E.C.	90	Normal.
5 P.M.	,,	Polygraphic.	144	Auricular fibrillation.
10 P.M.	,,	Polygraphic. (See Fig. 4.)	110	Auricular fibrillation. (Offset recorded.)
		E.C. (See Fig. 2.)	92	Normal.
Sept. 26-29	,,	Polygraphic.	90-100	,,
,, 30—11.15 A.M.	,,	,,	150	? Auricular flutter.
1.15 P.M.	,,	,,	126	Auricular fibrillation.
2.45 P.M.	,,	E.C.	104	Normal.
10 P.M.	,,	Polygraphic.	116	Auricular fibrillation. (Offset recorded.)
10.20 P.M.	,,	,,	100	Normal.
Oct. 1—10.30 A.M.	,,	,,	95	,,
3 P.M.	,,	,,	113	Auricular fibrillation.
5 P.M.	,,	,,	150	? Auricular flutter.
Oct. 4—11 A.M.	,,	,,	94	Normal.
9.30 P.M.	,,	,,	138	Auricular fibrillation.
Oct. 5—10.30 A.M.	,,	,,	97	Normal.
Oct. 6—11 A.M.	,,	,,	98	,,
10 P.M.	,,	,,	135	Auricular fibrillation.
Oct. 7.	,,	,,	94	Normal.
,, 8—9 P.M.	,,	,,	146	Auricular fibrillation.
Oct. 9-10.	,,	,,	95-100	Normal.
,, 11—10.20 A.M.	,,	,,	140	Auricular fibrillation.
9 P.M.	,,	,,	91	Normal.
Oct 13.	,,	,,	135	Auricular fibrillation.
,, 14-22.	,,	,,	100	Normal.
,, 23—10.20 A.M.	,,	,,	150	Auricular fibrillation.
9 P.M.	,,	,,	102	Normal.
Oct. 28.	,,	Polygraphic. E.C.	161	Auricular flutter; 2 : 1 block.
,, 29.	3i. tr. dig.	Polygraphic.	165	,,
,, 30.	3i. tr. dig.	Polygraphic. E.C. (See Fig. 1.)	160	,,
,, 31—11 A.M.	3i. tr. dig.	Polygraphic.	112	Auricular fibrillation.
4 P.M.	3i. tr. dig.	E.C.	104	Normal.
Nov. 3-30.	Tr. dig. stopped on Nov. 3.	Polygraphic. E.C.	85-95	,,

* E.C. = Electrocardiographic record.

place under digitalis to auricular fibrillation on two occasions. An intervening period of normal rhythm was interrupted by numerous paroxysms of auricular fibrillation.

I am indebted to Dr. John Parkinson for assistance in the preparation of this article.

THE BACILLUS OF BOVINE TUBERCLE AS A FACTOR IN PHLYCTENULAR AFFECTIONS OF THE EYE.[1]

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THE close relationship subsisting between phlyctenular affections of the eye on the one hand and "scrofula" or "struma" on the other has been known from early times, and was mirrored forth in the names "scrofulous" or "strumous ophthalmia" bestowed upon the disease by the older writers. After the discovery by Robert Koch in 1882 of the tubercle bacillus the clinical use of the word "scrofula" or "struma" became much restricted, if not actually abandoned. That tendency, as might be expected, was reflected in the nomenclature of the eye disease under discussion. The suggestion made many years before by the famous Dr. William Mackenzie, of Glasgow, that for the word "strumous" the word "phlyctenular" should be employed was very generally adopted in this country, and is so still. One never hears of "strumous ophthalmia" in England nowadays. Some of us, however, remained keenly alive to the fact that the ocular disease was frequently associated with the symptoms once termed "scrofulous," but now generally spoken of as "tuberculous."

About 14 years ago[2] I published an account of my personal investigations into the etiology of what may conveniently be termed "phlyctenulosis." Among a total of 669 such cases I found tubercle to be present in 214, or 31·98 per cent. A family history of tubercle was obtained in 72 per cent. of about 800 cases of phlyctenulosis. For purposes of comparison this could be got in 49·72 per cent. of 181 non-ophthalmic out-patients at the Evelina Hospital, London, and in 35 per cent. among 200 such children at the Queen's Hospital for Children, London. These facts and some others led me to express the opinion that a well-marked tendency to phlyctenulosis was to be regarded as indicating that the patient was, or was likely to become, tuberculous.

The general accuracy of my figures was borne out by those published by Dr. Vilmos Leitner some five years later.[3] Leitner found scrofulosis to be present in 45·1 per cent. of 371 children with various diseases of the conjunctiva, as against 88·7 per cent. of 585 children with phlyctenular affections of the conjunctiva. A few years later Dr. L. Weekers, of Liége, found active tuberculosis in 36 per cent. of his 156 phlyctenular cases, while a family history of tubercle was forthcoming in 56 per cent.[4] With the introduction of the various biological tests for tubercle, the opinion formed on purely clinical grounds has been confirmed, extended, and strengthened.

[1] A paper read before the Oxford Ophthalmological Congress on July 10th, 1914.

[2] Medical Press and Circular, Oct. 10th, 1900.

[3] Zeitschrift für Augenheilkunde. July, 1905.

[4] Bulletin de l'Académie Royale de Médecine de Belgique, vol. xxiii., 909, No. 9.

In 1907 I applied the Calmette tuberculin test to the eyes of 6 children, all of whom were affected with long-standing and relapsing ulceration of the cornea, diagnosed as of phlyctenular type.[5] Of these patients two alone manifested obvious tuberculous lesions in other parts of the body. Yet the ophthalmo-reaction was obtained in all of them. Aubaret and Lafon[6] had previously elicited the Calmette reaction in 4 healed cases of phlyctenular disease. Since those early experiments other observers have found that by this method the reaction can be obtained in from 80 to 100 per cent. of the cases of phlyctenulosis.

As regards the injection of tuberculin, in 1907 I obtained a positive general reaction in 4 children suffering from phlyctenulosis. W. Stock[7] had a general reaction in 87 per cent. of 23 patients with phlyctenulæ of the cornea. Weekers[8] obtained a general reaction in 10 cases of phlyctenulosis after the subcutaneous injection of tuberculin, and a focal reaction was observed in 8 of the cases.

The results obtained by Dr. George S. Derby with the von Pirquet method were of considerable importance.[9] Of 43 instances of phlyctenulosis 89 per cent. reacted to the tuberculin, while in nearly 80 per cent. physical examination disclosed evidence of tuberculosis. Weekers[10] obtained a positive cuti-reaction in 91 per cent. of 156 children suffering from phlyctenulosis. In passing, it may be said that the test was positive in only 11 per cent. of the children not affected with phlyctenulosis. The experiments made with von Pirquet's test by Dr. J. A. Jamieson and myself[11] may be briefly quoted. We employed the method in 20 patients, whose ages were from 2 to 12 years, and found that the cutaneous reaction was positive in every instance. A local reaction as regards the conjunctiva or cornea was observed in 8 of the patients. It should be added that 50 per cent. of these patients had more or less obvious signs of tubercle, medical or surgical, while a family history of tubercle was elicited in 75 per cent.

Finally, employing the Moro inunction method, Dr. H. H. Bywater, of Preston,[12] obtained 16 positive results in 16 cases of phlyctenulosis, and Rosenbauch[13] in 50 such cases 96 per cent. of successes.

We may take it, then, that the association between phlyctenulosis and tubercle is proved on both clinical and biological grounds, and can no longer be doubted even by the most sceptical. The connexion, however, has recently entered upon a new and somewhat significant phase. It has been pointed out by Dr. Bywater that the subjects of phlyctenulosis respond to the specific tests for bovine tubercle. For example, in 15 juvenile cases of phlyctenular disease he had obtained a positive reaction in every instance to the Moro inunction test with bovine tuberculin.[14] Twelve of these cases had been previously tested with human tuberculin, applied by the same method, and had reacted positively. In a latter communication[15] Dr. Bywater stated that in 16 cases of typical phlyctenular disease in children from 3 to 17 years of age he had obtained positive results in every single instance, both with the human and the bovine product. In 56·25 per cent. of the patients there was a family history of tubercle. No phthisis was present, but some other signs of tubercle were general in the children, especially enlarged glands.

Dr. Bywater's results appeared to me to be of considerable importance, and so, with the assistance of Dr. L. W. Jeffries, I have recently investigated the point at the Queen's Hospital for Children, London, in 20 children, aged from 17 months to 12 years, who were suffering from various forms of phlyctenulosis. Von Pirquet's method was adopted. In every case a positive result, both as regards bovine and human tuberculin, was obtained. The intensity of the reaction with the two products varied according to the particular patient. Thus, in one-half of the children the reaction was recorded as equal; in 6 the bovine exceeded the human reaction; and lastly, in 4 the reverse was the case.

That the conjunctival phlycten is not a tuberculoma is universally admitted. Nobody has yet succeeded in reproducing tuberculosis by inoculating the anterior chamber of susceptible animals with such products. Tubercle bacilli have not been found in the efflorescence. The lesion itself does not present the histological structure of tubercle.[16] We may well ask ourselves in what way and by what means a focus of tubercle, latent or manifest, is able to produce a phlyctenule of the conjunctiva or cornea. Leber, as is well known, suggested that the phlyctenulæ were the direct result of dead bacilli set free from a caseous focus elsewhere in the body. The hypothesis was supported by a certain amount of experimental evidence. He found that an inflammation recalling phlyctenular keratitis sometimes followed the injection into the corneal parenchyma of dead tubercle bacilli.[17] To this it has been objected that any foreign substance would do the same. Bruns (a pupil of Leber's) produced changes resembling phlyctenulæ by the injection of dead tubercle bacilli into the blood stream.[18]

A somewhat similar view has been espoused by J. B. Nias and Leslie Paton[19] on the ground that in upwards of 50 patients the opsonic index of the blood behaved in a way that was typical of a definite tuberculous infection. In an earlier communication, however, it is to be noted that those authors seemed to think that the condition must be assigned to "tubercle toxins circulating in the blood apart from their bacilli."[20]

The best working hypothesis is probably that set forth with conspicuous ability by Dr. Weekers—namely, that the eye disease is due to the circulation of soluble toxins thrown off by the deposit of tubercle elsewhere in the body. The analogy that he institutes with the so-called "toxi-tuberculides" is very much to the point. Those eruptions, as is well known, occur in tuberculous subjects, and yet tubercle bacilli have not been found in them, neither can they be successfully inoculated into guinea-pigs. Exactly the same may be said of

[5] Brit. Med. Jour., Oct. 19th, 1907.
[6] Gazette Hebdomadaire des Sciences Médicales de Bordeaux, August 4th, 1907.
[7] Tuberculose als Aetiologie der chronischen Entzündungen des Auges und seiner Adnexæ, Leipzig, 1907.
[8] Loc. cit., 1900, p. 690.
[9] Archives of Ophthalmology, September, 1908.
[10] Loc. cit., 1909.
[11] Brit. Med. Jour., April 16th, 1910.
[12] Thesis, 1911.
[13] Von Graefe's Archiv für Ophthalmologie, Band lxxvi., 1910, p. 370.
[14] The Ophthalmoscope, July, 1910.
[15] Thesis, 1911.

[16] Leber, almost alone among authors, has described the phlyctenule as possessing a tuberculous structure. The nodule, according to his investigations, is composed of polynuclear leucocytes, epithelioid cells, and many giant cells. The vessels of the part show endarteritis. Caseation is not present.
[17] 29 Berichte der Ophthalmologische Gesellschaft, Heidelberg, 1902, p. 66.
[18] Von Graefe's Archiv für Ophthalmologie, 1904, p. 439.
[19] THE LANCET, Dec. 1st, 1906, p. 1500.
[20] Transactions of the Ophthalmological Society of the United Kingdom, vol. xxvi., 1906, p. 232.

phlyctenulosis. Both the cutaneous and the ocular disease have on occasion been known to follow the subcutaneous injection of tuberculin (Hallopeau). The association of phlyctenulosis and of lichen scrofulosorum in one and the same subjects is, in my experience, not exactly an uncommon event. It may be reasonably suggested that such obvious tuberculous manifestations of the skin as scrofuloderma, lupus, and Bazin's disease (erythema induratum scrofulosorum) bear the same relationship to tubercle of the conjunctiva as is borne by lichen and acne scrofulosorum to phlyctenular affections.

The incidence of bovine tubercle as a cause of disease in human beings is known to vary greatly according to the locality. For example, as regards the Edinburgh district, Dr. A. P. Mitchell found bacilli of the bovine type in no less than 90·27 per cent. of 72 cases of cervical adenitis in children.[21] On the other hand, in Berlin Gaffky found them in not more than 3·84 per cent. among 78 instances of tuberculous glands. Gosio examined the type of the bacillus in 122 cases of human tubercle, and found the bovine variety in 0·81 per cent. only. The infection of human beings by bovine bacilli, indeed, appears to be as rare an event in some cities, as Berlin, as it is common in others, as Edinburgh. The figures brought forward by Dr. Bywater and myself apply to two cities only—namely, Liverpool and London. It will be interesting to see whether they are supported by returns from other cities of Great Britain.

If it can be shown that phlyctenulosis is usually associated with the bacillus of bovine tubercle, then the remedy lies at hand in the shape of a pure milk-supply. It is indeed possible that could such be secured by legislation, as at the moment appears to be very probable in England, phlyctenulosis might become one of the rarer affections of the eye in poor children instead of being, as it is at present, accountable for the vast majority of inflamed eyes in that class. The greatest cause of defective sight in childhood might be largely remedied. At all events, pending legislation, it would certainly seem advisable to sterilise raw milk before giving it to infants and children.

An even larger point, to which attention has been recently directed by an American physician, Dr. Louis C. Ager, of Brooklyn, should not be lost sight of. That observer urges that all children affected with phlyctenulosis should be submitted to expert physical examination for evidences of incipient tuberculosis, and that they should receive suitable treatment for that condition when present.[22] That raises the question whether the ophthalmic surgeon can be said to have discharged his whole duty when he dismisses the child suffering from phlyctenulosis with a little good advice and a pot of yellow ointment.

Welbeck-street, W.

[21] Brit. Med. Jour., Jan. 17th, 1914; THE LANCET, March 7th, 1914, p. 674.

[22] Long Island Medical Journal, June, 1912.

MEDICAL MAGISTRATES.—Mr. Hugh Stott has just been placed on the commission of the peace for the county of Sussex. Mr. Stott, who resides at Lewes, is medical officer of health to the East Sussex combined districts. He held the office of Mayor of Lewes in 1911–12 and 1912–13.—Dr. Sylvanus Glanville Morris, of Maerdy, Glamorganshire, has been placed upon the commission of the peace for the county of Glamorgan.

A CASE OF FEMORAL HERNIA TREATED BY BONE TRANSPLANTATION.

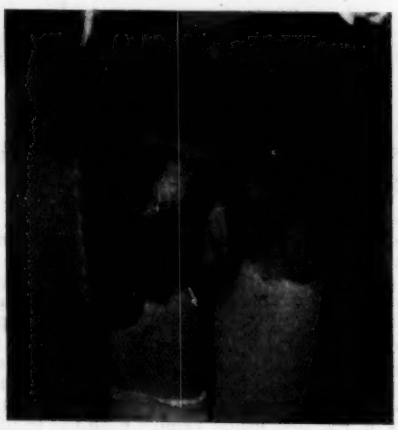
BY W. H. CLAYTON GREENE, M.B., B.C. CANTAB., F.R.C.S. ENG.,
SURGEON TO ST. MARY'S HOSPITAL, ETC.

FROM time to time surgeons have commented on the difficulty of dealing with the opening of a large femoral hernia. The method of approaching the neck of the sac from above Poupart's ligament and the subsequent suturing of the conjoined tendon to Cooper's ligament has given satisfactory results in ordinary cases, but where the opening is exceptionally wide other measures are required, and the implantation of filigree does not seem satisfactory in this situation.

The numerous articles recently published on the subject of bone grafting suggested to me the possibility of closing the entrance to the femoral canal by a bony transplant connected with the pelvis, and in this way increasing, as it were, the pelvic skeleton. The following is an account of a case in which the method was employed.

The patient, a male aged 57 years, was admitted to hospital with a double femoral hernia of about 14 years' duration. That on the right side was very large and caused great inconvenience; that on the left was smaller, but had recurred a year after an operation previously undertaken. (Fig. 1.) The

FIG. 1.



Large right and small left femoral herniæ.

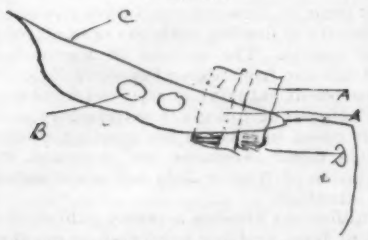
right-sided swelling was reducible, and the whole hand could be introduced into the ring.

An operation was performed on May 28th when the sac was exposed by means of a transverse incision, the contents reduced, and the neck ligatured in the ordinary manner. About two inches of the eleventh rib were then excised subperiosteally and the bone was split into two pieces through the cancellous tissue. The femoral wound was then widely retracted and the bone grafts were introduced into pockets made in the periosteum at the back of the pubic bone. There was no trouble in fixing them, and Poupart's ligament was then drawn down to the pectineus fascia, leaving a firm bone plate on its abdominal aspect. The left hernia was dealt with by the ordinary method. The wounds healed soundly and the bone transplant can be felt

firmly in position. The shadow of the transplanted bone can be seen in the X ray photograph.

I am publishing this case as it suggests a method of dealing with large inguinal as well as femoral hernias, and I am not aware of any case in which the method has been tried previously. The

FIG. 2.



After operation. A A, Bone transplants. B, Femoral vessels. C, Poupart's ligament. D, Pockets in pubic periosteum into which the grafts are fitted.

advantage of the natural material over foreign bodies such as silver filigrees is obvious, though I do not suggest that a rib is the most suitable site from which to take the graft. On another occasion I shall probably select the tibia.

Note.—Since the above was written the man has been examined again and the bone transplants can be felt firmly in place. There is a good deal of bulging of both inguinal regions, but the femoral canal is quite secure.

Devonshire-place, W.

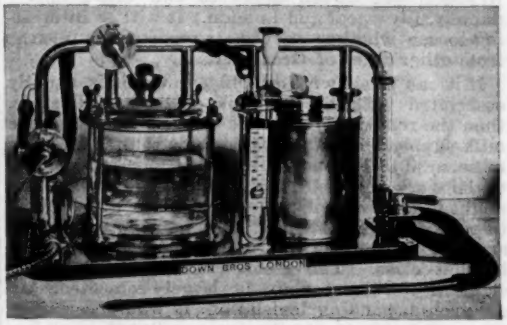
INTRAPHARYNGEAL ADMINISTRATION OF WARMED ETHER VAPOUR BY THE NASAL ROUTE.

BY H. M. PAGE, F.R.C.S. ENG.,
ANÆSTHETIST TO GUY'S AND THE WEST LONDON HOSPITALS.

AT the International Congress of Medicine, 1913, I read a report on Nasal Methods, in which I mentioned the experience of Souchon,[1] Thoms,[2] Pinneo,[3] and myself,[4] with ether by this route. Since then I have made further trial of the method with the help of an intratracheal apparatus. The advantages peculiar to intratracheal insufflation are the power of distending the lung and the prevention of blood and other matters from entering the trachea by means of the back flow of air. The other advantages incidental to the method are an even administration of a warmed ether vapour with the minimum of respiratory effort and the removal of the anæsthetist and his apparatus, with the exception of a tube, from the seat of operation. These incidental advantages can be obtained by intrapharyngeal insufflation.

For those possessing an intratracheal apparatus the method is perfectly simple and easy. A preliminary injection of morphia or omnopon and atropine, combined with scopolamine if desired, is of advantage in the case of adults, but is not necessary. Anæsthesia is first induced by one of the usual methods or drugs. If in a particular case a very light anæsthesia is indicated it is only necessary to produce a sufficient depth to enable the nasal tubes to be passed, but generally it is best to induce full surgical anæsthesia. Indiarubber catheters of suitable size are passed through the nares into the pharynx behind the tongue; they are coupled up with the delivery tube of the apparatus by means of a Y-piece, and the warmed ether vapour is delivered over the glottis. In some cases in children, for example harelip, I have found one tube to be sufficient.

The question of positive pressure used is, of course, quite unimportant as compared to the use of an intratracheal tube, but as I have found that the respiratory movements are less than normal with this method, though oxygenation is excellent, and as it must be possible to raise the intrathoracic pressure by closing the mouth if the nasal tubes fit closely, I have always set the safety valve of the apparatus to blow off at 15 mm. Hg. The pressure used as recorded by the manometer has been 3 to 10 mm. Hg. The mouth can be kept more or less closed according to the depth of anæsthesia required, but there must always be a way for expiration. As a matter of fact, in the majority of cases the mouth need not be interfered with at all. In some of my first cases, if resistant and "full" ether required, there was so much cooling of the ether that the dew was frozen on the outside of the reservoir with consequent loss of evaporation and weakening of the anæsthetic vapour, but the apparatus I now use is one of Kelly's latest pattern, to which Messrs. Down Bros. have added a simple water jacket to the ether reservoir as seen in the diagram, and this trouble is done away with.



To the left of the glass bowl forming the water jacket is seen the supply tube which is connected with an electric motor blower or foot bellows. The delivery tube is shown below.

The kind of cases in which I have successfully used the apparatus in this way are cleft palate, harelip, decompression, glands (neck), goitres, radical cure of hernia, cystoscopy, suprapubic cystotomy, and operations on the trunk and limbs and on bones. I have found it a particularly easy and good way of giving ether to children and I have had no trouble with adults. My youngest patient, aged 10 days, was a bad case of cleft palate with double harelip, another was aged 3 weeks, and there was a decompression in a patient aged 5. I have not yet tried this nasal plenum method in intraperitoneal operations, excepting hernias, but the authors mentioned above report favourably of its use in these cases. In the operations on the neck, such as glands and goitres, there was no trouble from interference with respiration. The absence of exaggerated breathing and the perfect oxygenation impress upon one the importance of the air way in anæsthesia, and point to the seat of obstruction or interference being above the glottis in the majority of cases. The nasal tubes take the place of an artificial air way passed through the mouth and act more efficiently.

I would particularly emphasise the possible advantages of this method in such cases as cleft palate, harelip, and cranial operations in children, in whom from their age and size it is difficult and perhaps inadvisable to pass a tube through the glottis or to use any appreciable increase of intrathoracic pressure, and in consequence chloroform is generally given. This method acts well in operations for goitre. In operations for exophthalmic goitre I consider it better than intratracheal insufflation, as in my opinion there is less chance of producing bronchitis, one of the special causes of death after these operations when done under general anæsthesia, and it obviates the necessity of inducing the deep anæsthesia which is a necessary preliminary to intubation. Full surgical anæsthesia is dangerous in well-marked cases of exophthalmic goitre, and is quite unnecessary in any case of goitre if morphia, &c., has been previously given and local infiltration with novocaine used as well. So far there has been no case of post-anæsthetic bronchitis or pneumonia, and no trouble from after-vomiting.

The important points in connexion with a plenum method by means of nasal tubes as here described are that there is an excellent air way, that the ether vapour is warmed, that the anæsthesia produced, though efficient, is light and even, and that ether can be given in certain cases where chloroform would otherwise be used.

Bibliography.—1. Medical News, Nov. 23rd, 1895. 2. Surgery, Gynæcology, and Obstetrics, December, 1911, p. 695; Yale Medical Journal, May, 1910. 3. Journal of the American Medical Association, June, 1912, vol. lix., p. 1862. 4. Proceedings of Seventeenth International Congress of Medicine, 1913, Subsection VII. B, part ii., p. 100.

CASE OF PRIMARY CARCINOMA OF LIVER IN A CHILD 3 YEARS OLD.

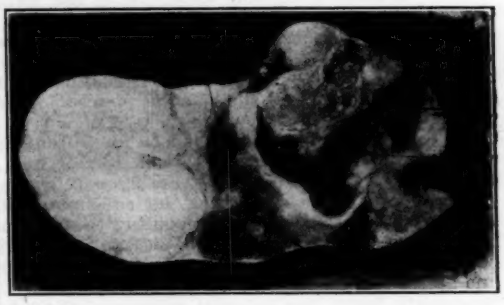
BY W. T. FREEMAN, M.D. DURH., F.R.C.S. ENG.,
PHYSICIAN, ROYAL BERKSHIRE HOSPITAL, READING.

THE patient, a male aged 3 years, was admitted into the Royal Berkshire Hospital under my care on Dec. 10th, 1913. There was a history of abdominal swelling extending over eight months, accompanied with dyspnœa, but with very little belly pain. Upon admission the urine was found to be normal, not containing albumin, sugar, or bile. The bowels were open. The heart was normal; the bases of both lungs yielded a few rhonchial and sibilant sounds. Abdominal examination showed that the belly was enormously distended. In the right hypochondrium for 2 inches below the costal margin a hard (very hard) and somewhat uneven ridge could be felt; this ridge extended across to just within the left hypochondrium. The main mass of the growth grew apparently from beneath this ridge and passed downwards into the right iliac fossa and pelvic region, and to the left an inch beyond the umbilicus and downwards well into the corresponding iliac fossa, but to a lesser extent than on the right side. The spleen was barely palpable and could be differentiated from the liver growth. No lymphatic glands and no other lumps could be felt.

The temperature was normal or subnormal until within four days of death (Feb. 17th, 1914). The abdominal measurements gradually increased from 24 inches on admission (level of umbilicus) to 25½ inches. There was gradually increasing cachexia, but the child took his feeds remarkably well; indeed, was ravenous until within a week of the end. Some vomiting occurred on Dec. 20th, and on Jan. 1st and 2nd, but upon no other occasions. Pain and tenderness during the child's residence in hospital were almost negligible symptoms.

In January the case was exhibited before the Reading Pathological Society, and the diagnosis was one of malignant growth of the liver with a possible alternative of Banti's disease. In this latter connexion the presence of a small amount of ascitic fluid was noticed. The blood examination report soon after admission by Dr. R. Donaldson was as follows: Red cells 4×10^6, hæmoglobin 55 per cent., colour index 0·6. White cells 15,000, polymorphonuclears 55 per cent., eosinophiles 4 per cent., small lymphocytes 33 per cent., mononuclears 6 per cent., and transitionals 2 per cent. The red cells showed ano- and polychromasia.

The accompanying figure (reproduced from a photograph) faithfully depicts a section through



about the centre of the growth. The bile-stained (AA) and blood-stained (BB) portions were the only parts of the tumour showing some approach to normal liver tissue. A small amount of peritoneal fluid was found after death. No secondary growths were discovered anywhere. The mass weighed 51 oz.

The points of interest appear to me to be the primary malignant growth of a carcinomatous nature in a child of only three years of age, the absence of all secondary deposits, and until the end was quite near the comparative absence of pain, tenderness, or of decided dyspepsia or anorexia. Dr. Donaldson is publishing at a later date a detailed macroscopical and microscopical description.

Reading.

LITERARY INTELLIGENCE.—Mr. Henry Kimpton announces the following works for publication: "Gonorrhœa and its Complications in the Male and Female," by Dr. David Watson; "Practical Pediatrics: A Modern Clinical Guide in the Diseases of Infants and Children for the Family Physician," by Dr. James H. McKee and Dr. W. H. Wells; "The Diagnosis and Treatment of Digestive Diseases," by Dr. G. M. Niles; "Nutrition: A Guide to Food and Dieting," by Mr. C. E. Sohn; "Surgery, its Principles and Practice, for Students and Practitioners," by Dr. A. P. C. Ashhurst; and also a second edition of "Practical Therapeutics," by Dr. D. M. Hoyt.—It is intended that in the future the St. Bartholomew's Hospital Reports shall be published in three parts each year; the first two parts containing scientific and clinical papers, the remaining part the hospital statistics, &c. It is hoped that these parts will appear in July, December, and March of each year. The first part will appear at the end of the present month.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

CASE OF SEVERE INJURY TO AN EYE FROM THE CONTENTS OF A GOLF BALL.

BY WALTER H. H. JESSOP, M.B. CANTAB., F.R.C.S. ENG.,
SENIOR OPHTHALMIC SURGEON TO ST. BARTHOLOMEW'S HOSPITAL.

THE following case is interesting in demonstrating an unexpected accident. To most people a golf ball means a ball made solely of rubber. The eye of the patient whose case is here noted was very severely injured (and it is still doubtful how much his vision will be interfered with) in the course of discovering that some rubber golf balls contain other material than rubber.

The patient, a man aged 43, on June 9th was cutting away with a knife the substance of a zone zodiac golf ball to show its construction to a friend, when the core of the ball was pierced. This was followed suddenly by a discharge of a semi-fluid caustic substance with such force that it was deposited on the ceiling, about 10 feet high, and also thrown laterally. Unfortunately the patient's eyes were open, and the substance hit the right eye with great force, covering the cornea and conjunctiva with a greyish putty-like caustic substance. The eye was washed with boric lotion and this substance picked off in shreds. Mr. N. Rushworth found the external surface of the lids of the right eye very red and swollen; when I saw the case the same evening the ocular and palpebral conjunctivæ were much burnt and ecchymosed, and the cornea hazy. The treatment was olive oil and atropine. The next day the conjunctiva of the right eye was roughened, ashy-grey in colour, and ecchymosed; the cornea had considerable loss of surface, especially at the nasal side. With fluorescine the cornea stained green nearly all over its surface, and there was a marked crescentic deep ulcer at the nasal side.

June 23rd.—The patient has had great pain, especially at night, and there is marked photophobia. Right eye: conjunctiva very rough on the surface, and is in rags from ulceration in the nasal and inferior portion near the cornea; much vascular congestion, small ecchymoses, and chemosis; mucopurulent discharge. The cornea looks more opaque, and the ulcer at the nasal side is about the same; the staining by fluorescine is more marked. Vision: right eye barely counts fingers. Treatment: oil and atropine, fomentations, and the eye to be bandaged as much as possible.

June 26th.—The patient still in bed and in a darkened room. He cannot stand much pressure on the eye by bandage. Photophobia very marked and still much pain. The conjunctiva has still the ragged, rough appearance. The cornea is roughened all over the surface and is greyish in appearance; the ulcer is healing, but nearly the whole surface of the cornea stains with fluorescine.

July 3rd.—The eye looks much better, but there is still much photophobia. The conjunctiva, though congested, is smooth as to its surface. The cornea, hazy all over its surface, does not now stain with fluorescine.

July 6th.—Patient still has photophobia. The conjunctiva smooth, though still congested; cornea very hazy, but surface smooth; pupil well dilated under atropine. Vision, right eye 6/60.

Harley-street, W.

A NOTE ON THE EFFECT OF THE HYPODERMIC INJECTION OF ADRENALIN CHLORIDE SOLUTION.

BY W. MILLER, M.D. EDIN.

THIS note is based on the experience gained by treating during the past two and a half years 11 cases, 8 of spasmodic asthma and 3 of hay fever, with hypodermic injections of adrenalin chloride solution. Four of the patients were males and seven were females, and the ages ranged from 6 to 35 years. The injections were given once a week, and usually numbered eight or ten, but in one case 58 were given. The doses were small, varying from 10 minims of 1:15,000 to 10 minims of 1:5000 solution.

My general conclusions are as follows. About one minute after the injection the patient may complain of a feeling of oppression and sometimes of faintness; there is marked pallor, and the pulse as a rule increased to 110, being small and slightly irregular, and may attain to 130 per minute. These symptoms pass off gradually in from three to ten minutes, the patient grows comfortable, recovers colour and a pulse of good volume, which becomes slower by some ten beats per minute than before the injection, the slowness continuing markedly for some hours.

There are, however, considerable variations from this general story, not only in different individuals, but also on different occasions in the same patient. Thus:—

(*a*) Two patients showed no immediate effect.

(*b*) In a lady aged 25, after an injection of 10 minims of 1:5000 solution, the pulse remained small, rapid, and irregular for three hours, and there was no second stage of slowing and steadying. She felt and looked very ill, and it was some days before she recovered. There was no obvious heart lesion, but the pulse was normally small.

(*c*) A man, aged 34, was little affected by the first injection (10 minims of 1:5000), but after the second (10 minims of 1:5000) and third (10 minims of 1:10,000) the pulse, although increased only in rate about 15 beats per minute, became very irregular and remained so for quite 20 minutes. The drug was therefore stopped.

Intravenous injection produces startling results. It occurred accidentally on two occasions with the same patient, a lady aged 33, who was receiving weekly injections and responding in the usual way. On the first occasion the pulse before the injection was 85 per minute, regular, but soft. Ten minims of 1:5000 solution were injected under the skin of the forearm. No vein was noticeable at the site punctured, but on withdrawing the needle a drop of blood followed. Within a few seconds the face and lips became ashen and the patient leant back in her chair murmuring that she felt very ill. Respiration was quick and shallow, the pulse very small and so rapid as to be uncountable. She remained in this state for four or five minutes before improvement was noticeable. After about 15 minutes she was better, but felt rather shaken; the pulse was then 78 per minute, of fair volume and almost regular.

On a second occasion an attack of asthma was just commencing; the pulse was 100 per minute. Ten minims of 1 : 10,000 was given and a drop of blood followed the withdrawal of the needle. Again the same symptoms followed, but although the pulse was not countable, her condition was not so alarming, and after about three minutes began to improve. Within five or six minutes she was quite comfortable, the pulse 80 per minute, regular, and of good volume, while the respiration was normal.

I have never given a series of large doses (e.g., 10–20 minims of 1 : 1000 solution) for asthma, but I have given occasionally a single one for other conditions without noticing any initial lowering of the blood pressure. A colleague, however, who used the drug in a bad case of spasmodic asthma, accompanied by mitral disease, gave 10 minims of 1 : 1000 solution, which immediately relieved the breathing. He repeated this dose on two succeeding days, with the result that the patient's condition became extremely critical owing to delirium cordis. A week later, the heart having recovered and the asthma returning, he gave a single dose, but the heart symptoms followed at once.

The result in asthma is not cure, but temporary relief. That the injections may be utilised to enable other treatment to take effect was indicated by one of my 11 cases. A girl, aged 7, had suffered since the age of 2 from occasional attacks, which had gradually become more frequent and lengthy until they occupied three or four days of each week. There was enlargement of the bronchial glands. The usual remedies had no effect, so injections (10 minims of 1 : 10,000) were given once a week for 58 weeks, during which time general treatment was adopted for the glands. At the end of this time there had been no attack for three months, and since then (July, 1912) there has only been a return on a few occasions when the patient had colds. I do not attempt to generalise from so small a number of cases; I only indicate the points suggested: (1) the difference in the immediate effect of large and small doses is in accordance with physiological results; (2) individual variation in susceptibility may be great; (3) possibly a condition resembling anaphylaxis develops in some cases—for example, Case (*c*) and the case whose notes were sent me by a friend.

Rayleigh.

PRESENTATIONS TO MEDICAL MEN.—In commemoration of his marriage and in recognition of his many years' service as medical officer, the Brighton Division of the Sons of Temperance on July 10th presented Mr. E. Fitzgerald Frazer, F.R.C.S. Irel., with a silver coffee-pot.—In the Grand Hotel, Leicester, on July 8th Mr. Robert Wallace Henry, M.D., B.Ch. Dub., was presented with a solid silver tea and coffee service, with kettle, stand, and tray, the latter bearing the following inscription: "Presented to Dr. R. Wallace Henry, Originator, Founder, and First President of the Union of Medical Practitioners and the Leicestershire and Rutland Public Medical Service. A mark of love and esteem from his colleagues. July 8th, 1914." The reception was attended by medical men from all parts of Leicestershire and Rutland and the surrounding districts, and the speeches bore ample testimony to the excellent work which Dr. Henry has done in the fight for medical efficiency and the public good. Mrs. Henry's name was associated with the presentation. In acknowledging the gift Dr. Henry said that both in inaugurating the Public Medical Service and the Medical Practitioners' Union they had set an example which was likely to be followed throughout the country.

Medical Societies.

ROYAL SOCIETY OF MEDICINE.

SECTION OF OBSTETRICS AND GYNÆCOLOGY.

Exhibition of Specimens.—Utero-rectal Adenomyoma.—Migratory Adenomyomata.

A MEETING of this section was held on July 2nd, Dr. W. S. A. GRIFFITH, the President, being in the chair.

Dr. H. R. ANDREWS showed a Uterus which he had removed after performing Cæsarean section. Labour was obstructed by a carcinomatous growth which had surrounded the external os, but had caused no symptoms. The patient, who was aged 39 years, was admitted to the London Hospital on March 1st, 1914, having been in labour about 24 hours. On admission the pains were strong and frequent. The cervix was rigid and only two-fifths dilated. More careful examination of the cervix found it to be extremely hard and firm feeling, as if a portion of a thick rubber ring pessary had been let into the tissues of the cervix on its anterior two-thirds; the posterior one-third was normal. There was no ulceration, but in front and to the left a raised everted edge could be made out. On examination with a speculum it was impossible to diagnose that it was carcinomatous by its appearance, but a sound sank into the tissue about half an inch with only gentle pressure. Cæsarean section was performed and the uterus then removed. The anterior wall of the cervix above the growth was so thin that it tore in separating it from the bladder. On examination after the operation a hard, white growth was found to occupy all the lower part of the cervix except a little more than an inch posteriorly. Sections showed squamous-celled carcinoma. It was very curious that in this case carcinoma which was sufficiently advanced to cause obstructed labour had produced no symptoms of its presence.—Remarks were made by Dr. HERBERT SPENCER and Dr. AMAND ROUTH.

Mr. JOHN D. MALCOLM showed a specimen of Fibromyoma complicating and masking carcinomatous disease of the cervix uteri. The patient was a healthy looking woman aged 53, who had for years suffered with a fibroma, but of late had very free red discharge and discomfort. On examination there was an obvious fibroid about four inches in diameter at the fundus, but there was also another growth in the region of the upper part of the cervix. There was no ulceration of the tissues, but a diagnosis was made that some active degeneration, either malignant or necrotic, was in progress. On opening the abdomen the fundus contained a large fibromyoma. Slight traction on this caused a laceration of the tissues of the cervix below the tumour, which was now found to be the seat of extensive cancerous disease. The removal of the malignant mass was found to be very difficult owing to its extensive connexions to the bladder and ureters. The operation lasted three hours. Unfortunately, though the patient did well for a time, the growth recurred, and she died within a year. Sections of the growth proved it to be a carcinoma, partly squamous and partly cylindrical celled in type. It apparently arose from the interior of the cervical canal.

Dr. H. MACNAUGHTON-JONES showed a specimen of Adeno-carcinoma limited to the summit of the uterine cavity. The uterus had been removed from a patient aged 54, a widow. She had had four children. For some years she had a vaginal discharge which was coloured but never offensive. The uterus was curetted and the material removed was reported to be adeno-carcinoma. Ten days later the uterus was removed, and at the summit of the fundus a soft growth was found projecting into the uterine cavity and involving the myometrium. The growth was 1¾ inches in length. It exhibited the ordinary features of an adeno-carcinoma.

The PRESIDENT read notes of, and showed, a case of Utero-rectal Adenomyoma with extensive decidual metaplasia complicating pregnancy. The patient, aged 37, had been married 15 years, and had had one child born in December, 1899. She was pregnant again when seen at about the sixth month. The last regular period ceased on Sept. 22nd, 1913, and the expected day of confinement was June 27th, 1914. She was admitted to St. Bartholomew's Hospital on

account of a curious mass in the recto-vaginal septum complicating the pregnancy. The pregnant uterus extended 9½ inches above the symphysis, and on its anterior surface was a flat sessile fibroid. There was some hydramnios. The mass in the recto-vaginal septum was ill-defined and soft and spongy in character, not bleeding on digital examination, but on exposing it with a Sims' speculum and touching it with dressing forceps free arterial hæmorrhage followed. The mucosa of the rectum was not invaded. A fragment of the growth was removed through the posterior fornix for examination. Abderhalden's test for pregnancy and carcinoma was faintly positive. The optical test was not done owing to insufficient material. During the following month the case was carefully watched, and it was found that the cervico-rectal growth had increased considerably, compressing the rectum and extending on the right side as far as the sacro-iliac synchondrosis. It was decided to try the effects of radium, and this was done, 100 mgm. of radium bromide being inserted into the middle of the growth, and two other tubes containing 37 mgm. of radium carbonate and 50 mgm. of radium bromide for 20 hours. In June the patient was in good health and the pregnancy apparently normal, with less hydramnios. Locally the cervico-rectal mass had diminished considerably. Nothing further was done, as it appeared that there was a good prospect of spontaneous delivery. Sections of the growth stained by Van Gieson's method showed large masses of typical decidual cells in a stroma of muscle and connective tissue. Within each mass was a cleft, lined by a thin lamina composed of flattened epithelial cells. In one part was a dilated gland tubule lined by low cubical epithelium and completely surrounded by large decidual cells. The histological characters of the growth seemed to be those of an adenomyoma, in which the stroma cells surrounding the gland tubes had undergone decidual reaction. The President thought that the decidual change supported the view that extra- as well as intra-uterine adenomyomata were of Müllerian origin.

Dr. ARCHIBALD LEITCH communicated a paper on Migratory Adenomyomata, with epidiascopic demonstration. He said that it was not uncommon to find endometrial tubules and stroma penetrating for some considerable distance into chinks in the musculature of the uterus where the organ was approximately normal, and in this way adenomyoma started. In the diffuse form of adenomyoma the connexion between the endometrium and the characteristic parts of the tumour was easy to establish; but sometimes the point of entry of the endometrium was restricted and the connexion was difficult to find. Further, in some intramural adenomyomata there was no association between the two, but their histological identity with the former group left little room for doubt that they had migrated from the endometrium. They might be found as subserous pedunculated tumours, or they might be extruded within the layers of the broad ligament. Finally, they might be quite separate from the uterus. A case was recounted of an adenomyoma in the base of the broad ligament still connected to the uterus by means of a very fine, long pedicle. The stage further would have been complete separation, and to explain the presence of a tumour containing glandular epithelium in such a situation the favourite theory was an origin from hypothetical Müllerian or Wolffian duct remains or a metaplasia of peritoneal inclusions. These hypotheses were rejected in favour of the migratory theory. He instanced two cases of adenomyoma of the recto-vaginal septum that had come under his notice. In one of these the gland tubules had actually penetrated the rectal wall as far as the submucosal layer. In both he could trace the tubules into the cervical portion of the uterus, and in both the cervical endometrium had penetrated far into the musculature, both approaching and, he thought, being continuous with each other. He reported in full a case in which a small discoid growth was found on the posterior wall of the uterus opposite to a tumour in the sigmoid loop of the pelvic colon. Both were typical adenomyomata, and the sections showed that the separation between the two was quite recent. He held that the original tumour had migrated through the uterine wall, had adhered to the dependent colon, and that the tubules had infiltrated the wall of the latter. Adenomyomata were infiltrating benign tumours of a migratory character, always arising from the endometrium, and in whatever locality they were finally found they had the markedly typical characters that separated them from all other conditions. He had two cases which had taken on malignant change.

Dr. CUTHBERT LOCKYER opened the discussion which followed on these two papers.—Dr. SPENCER said he did not think that the cases of retro-uterine and sigmoid adenomyositis shown by the President and Dr. Leitch were of endometrial or Müllerian origin; it was well known that the peritoneum formed decidua during pregnancy, and its presence in the case reported by the President was no proof of Müllerian origin. He looked forward to the future history of that interesting case. One of the most disastrous results of radium was the peri-rectal fibrosis it set up. Wolff had found X rays of little benefit in adenomyositis. Dr. Spencer had pointed out a year and a half ago, in discussing Dr. Lockyer's case of excision of the uterus and rectum for this condition, that the researches of R. Meyer, Amann, and Renisch showed that the growth arose in the peritoneal endothelium. The researches of Pick, Orloff, Ivanoff, Opitz, and others, and examination of the speaker's own three cases supported this view, which he was interested to see Dr. Lockyer now adopted. Migration of endometrium and the Müllerian and Wolffian theories did not explain some of the remote adenomyomata, which had been observed in the sigmoid, small intestine, stomach, pleura, pericardium, as well as in the pedicle of a ventro-fixed uterus. Dr. Spencer had in his last case performed hysterectomy and dissected the growth from the rectum with the galvano-cautery. The patient recovered, with normal defæcation. He agreed with Dr. Lockyer that adenomyositis was not a tumour except in the clinical sense. He thought also that the ordinary diffuse uterine "adenomyoma" was not a "tumour," but a hypertrophy and hyperplasia.—Dr. W. W. H. TATE and Dr. HERBERT WILLIAMSON also spoke.—The PRESIDENT and Dr. LEITCH replied.

Dr. GRIFFITH having delivered his Presidential Address, votes of thanks were given to the retiring officers of the section for 1913–14.

UNIVERSITY COLLEGE, LONDON.—In the Faculty of Medical Sciences at University College the following medals have been awarded: Senior anatomy class (silver), E. Sakoschansky; junior anatomy class (silver), G. V. Anderson; senior physiology class (silver), M. Schwartz; organic and applied chemistry (silver), J. de S. Wijeveratne; junior pharmacology class (gold), B. MacLean; hygiene medical course (silver), C. I. de Silva.

OXFORD OPHTHALMOLOGICAL CONGRESS.—The annual Ophthalmological Congress was held at Oxford on Thursday and Friday, July 9th and 10th, under the mastership of Mr. R. W. Doyne. It was attended by rather more than the usual number of members and proved to be one of the most successful yet held. The addresses given in the mornings were extremely interesting and led to some spirited discussions. On Thursday afternoon operations were described at the Eye Hospital by several surgeons, and some cases of interest were shown. On Friday afternoon a discussion was held on the Question of Compensation in Injuries to the Eye. It was opened by Dr. William Robinson, of Sunderland, Dr. Frank Shufflebotham, of Newcastle-under-Lyme, speaking next. Mr. Angus MacNab, Mr. J. Jameson Evans, Dr. J. Gray Clegg, Mr. G. H. Pooley, and Mr. R. J. Coulter also spoke. The annual dinner of the Congress was held in the hall of Keble College on Thursday night, Professor Arthur Thomson being in the chair. After the dinner a discussion on the future of the Congress was held, when it was decided, owing to the success of the meetings in the past, to continue to carry them on in the same way as before. This year the addresses, the scientific and commercial museums, were all held in the Department of Human Anatomy in the University Museum, kindly lent by Professor Arthur Thomson, the fact of them all being under one roof being a great improvement on the previous arrangement. Amongst the distinguished visitors to the Congress from abroad were Dr. Casey Wood, Dr. Wendell Reber, Dr. Brown, and Dr. Gifford from the United States, and Dr. Darier from Paris. The meeting, which terminated on Friday night with the usual smoking concert, reflects great credit on the master and the energetic secretary, Mr. Sydney Stephenson.

Reviews and Notices of Books.

Handbuch der Deutschen Schulhygiene.

Herausgegeben von Professor Dr. Med. HUGO SELTER. Dresden und Leipzig: Theodor Steinkopff. 1914. Pp. 760. Price 28 marks.

THE many pens that have gone to the production of this book have unfortunately not been in collaboration; the same subject is treated twice and even thrice over, nor does the repetition bring out as a rule anything new. Herr Graupner, a schoolmaster, discusses the defects of speech, of the eyes, and of hearing in pages 200 to 216. Professor Drigalski goes over the same ground in more detail on pages 440 to 468, whilst Professor Leubuscher returns to the examination of the special senses on pages 538 to 602. Despite this repetition important matter is omitted; there is no mention of myope schools, which have proved a great success since their introduction in 1908 in London.

Of strabismus Drigalski says that its only interest for the school doctor is the question at what age the child should be operated upon. There is no mention of orthoptic treatment or of treatment by glasses and atropine; both methods have been successfully carried on in young children at school. He recommends a 1 per cent. solution of homatropine for the estimation of difficult cases of hypermetropia. This solution is too weak, and it has been shown that without a mydriatic the results are almost valueless in estimating the refraction of children under 14.

Drigalski regards stammering as a neurosis which can be cured by appropriate physical exercises. He seems to think the failures are due to the exercises not being kept up at home (p. 480). Dr. Flachs more wisely remarks that stammering has many causes and depends upon a neurotic disposition. For successful treatment the whole condition of the child must be taken into account. Graupner has obviously more first-hand knowledge of the defect; he recognises that whilst improvement is frequent so long as the stammerer is under the specialist's treatment, the defect practically always returns when the patient leaves the specialist. He therefore regards all the breathing exercises and such like by specialists as treatment by suggestion, and on the whole recommends psychotherapeutic measures. Stammerers ought to be taken in hand as soon as the defect appears; in early years they can be permanently cured without exercises or operations. The paralysing influence this defect has upon the whole character of the sufferer can be realised only after minute investigation. Though Gutzmann's estimate of 1 per cent. of school children as stammerers is probably excessive, the defect is sufficiently widespread to merit more careful attention than it gets from the school doctor. It is not a defect that should be relegated to the advertising specialist.

The book is rendered bulky not only by repetition but by the inclusion of unnecessary matter. Professor Frohlich's popular sketch of the nervous system is quite out of place here; the description of mental diseases, the several pages on hysteria and neurasthenia are more suitable to a text-book on medicine. But despite its 760 pages much has been omitted that should have found a place, and that, indeed, appears in Burgenstein's well-known text-book for school hygiene, although 200 pages shorter. In the first section dealing with hygiene of the school building there is no mention of heating by gas, although many advantages have been claimed for this method, based upon the experience of German schools. In ventilation too much importance is still ascribed to Pettenkofer's formulas and too little to the circulation of air, its temperature, and moisture. The section on school lighting omits Engelbracht's (1905) formula: $f = \frac{F}{5} \times \frac{x2}{36}$ —the basis of recent work in school illumination. There is no mention of Harman's photometer, which is in every way superior to Wingen's and much cheaper. The authors, indeed, seem curiously unfamiliar with the school hygiene movement outside Germany. Burgenstein's book contained 27 references to London in the index; this work has but two, one of them is wrongly paged and the other is quite out of date.

School clinics are discussed in a few lines with a reference to The Hague and Lucerne, and Strasburg. We do not recognise Kowentree, who is the authority (without further reference) for the statement that out of four school children only two are willing to have free dental treatment. The clinics at Cambridge, Bradford, and Deptford in this country tell a very different tale. The authors, Drigalski, Flachs, and Leubuscher, who deal independently with the subject, seem to think that the last word in prophylaxis is Jessen's School Clinic. In England we have gone beyond that; the teaching of Sim Wallace and other dentists is bearing fruit in our public health. The work done by Dr. J. Wheatley on the prevention of caries in Shropshire has no right to be passed over in a book on school hygiene. Had modern English teaching on this subject been known the out-of-date and really dangerous diets recommended for children on pages 335 and 336 would not have been published.

It is true that inspection and treatment become an obsession in England; all that seems required by the authorities from the unhappy school doctor is that he should be looking at the mouths of unhappy school children, weighing them, and measuring them at a given rate per hour. The hygiene of education remains almost at a standstill, and here something may be learned from Selter's text-book. Sex instruction is dealt with by Flachs and Drigalski; we cannot, however, agree with either of those doctors that it should be the regular business of the teacher to give children this instruction. Such definite omission of home instruction is a mistake, a remark which, of course, does not apply to college students or to training colleges for teachers.

The question of homework has been raised in this country by a few parents, but is almost ignored by the medical and teaching professions. Graupner reviews the whole subject and shows by statistical and other results that homework is an ill to young children. He, as schoolmaster, shares Meumann's idea that homework should be required only in the upper forms. Fatigue, coördination, the time-table and other questions involving psychological interests are all excellently treated. Valuable also is Drigalski's carefully written section on the infectious diseases.

But for the reasons we give this book cannot take the place of Burgenstein and Netolitzky's handbook. A new edition will require the omission of the many overlappings, the cutting out of some padding, and the recognition that England and America have made some new and valuable contributions to school hygiene.

The Principles of Pathologic Histology.

By FRANK B. MALLORY, M.D., Associate Professor of Pathology, Harvard Medical School; Pathologist to the Boston City Hospital. With 497 figures containing 683 illustrations, 124 in colours. London and Philadelphia: W. B. Saunders Company. 1914. Pp. 677. Price 24*s.* net.

THIS book treats of pathology from the morphological and biological point of view, the author's aim being to portray as far as possible the cellular elements out of which the various lesions are built up, and then to trace the development of the lesions from the simplest to the most complex. In the author's opinion the morphologic side of pathology for many students is a dead subject. The book itself is based, so far as possible, on the study of lesions from the earliest to the most developed—not on what someone has written about them, the pathologic material having been collected during the past 16 years in the Boston City Hospital. As the author modestly states, the book is incomplete, but it affords a framework on which to build in the future.

It is divided into two parts. Part I. (pp. 17–410) deals with general pathologic histology under the following heads: inflammations; retrograde processes and the substances associated with them; special injurious agents and the lesions they produce; and tumors. Part II. is concerned with special pathologic histology (pp. 411–622), including the organs of circulation, respiration, digestion, the urinary and male and female genital organs, the blood-making organs, the organs of the central nervous system and locomotion and other organs—i.e., the adrenal and thyroid glands.

First and foremost what strikes one is the superb quality, artistic representation, and clear definition of the illustrations. Unfortunately, neither the magnification, the method of fixing, nor the methods of staining are indicated. Practically all the illustrations are histological, and only a few represent the naked-eye appearance in disease—e.g., gouty deposits in the ear, hands, and foot, typhoid ulcers, and keloid. Red blood corpuscles are described as "bell- or cup-shaped masses of protoplasm containing no nucleus." This is not the usual acceptation of their shape. Fibrin is described as "a pathologic product out of the serum which has exuded." Is serum the correct word? Under the head of special injurious agents and the lesions produced by them micro-organisms are dealt with. A succinct, well-illustrated account of the various pathogenic bacteria occupies over 100 pages, while a few pages are given to some animal parasites such as entamœba and dysentery, balantidium and trichinella spiralis. The remainder of the first part, pp. 251–410, is devoted to tumours. Their most striking characteristic is their autonomy or independence of growth. In the human body there are some 15 different distinct varieties of cells giving rise to tumours which may be denominated type cells. There are some type cells which do not seem to give rise to tumours (erythroblasts, megakaryocytes). The illustrations are here an outstanding feature.

About 50 pages are given to the pathologic histology of the organs of circulation, but there are no illustrations of the gross visible lesions of the organs concerned. In regard to the pathology of the lungs—unlike what occurs with the heart—toxic lesions play no important part. A little over 20 pages suffice for this subject. Beginning with the œsophagus, the digestive tract is dealt with in about 50 pages. Toxic lesions probably play a more important part in pathology of the liver than in any other organ. The histology of the pancreas is rather fully dealt with, and reference to recent experimental work on this organ is introduced. The chapter on the urinary organs is admirable, the toxic and infectious lesions being the most important. Having regard to the importance of the nervous system, 15 pages seem rather too short for the purpose.

The author has produced a noteworthy book on somewhat original lines—admirably and profusely illustrated—to set forth what he calls the principles of pathologic histology. That being so the reader must not look for a compendium of heterogeneous facts. A solid basis has been laid, and we sincerely hope that the opportunities offered by the Boston City Hospital on the one hand and an early call for a second and enlarged edition on the other will enable him to build largely on the secure foundation.

Diseases of Children.

Edited by Dr. M. PFAUNDLER and Dr. A. SCHLOSSMANN. English Translation edited by HENRY L. K. SHAW, M.D., and LINNAEUS LA FÉTRA, M.D. With an introduction by L. EMMETT HOLT, M.D. Vol. VI.: *Diseases of the Ear: A Work for the Practical Physician.* By ARTHUR J. BEDELL, M.D., Clinical Professor of Ophthalmology, Albany Medical College, Albany. With 130 illustrations. London and Philadelphia: J. B. Lippincott Company. 1914. Pp. 430. Price 21*s.* net.

WE gather from the introduction to this volume that it is an addition to the original treatise on diseases of children, published in Germany, and it is obvious that the attempt to write a book of the size of the one under consideration, of some 400 pages, on diseases of the ear in infancy and childhood, must of necessity be a very difficult task. Indeed, we think it open to question whether such a work is really as imperatively demanded as Dr. Bedell seems to think.

Practically the first hundred pages are occupied by a description of the anatomy and physiology of the ear, and testing of the hearing and ears, which includes the examination of the labyrinth according to the latest methods. The book that Dr. Bedell has given us would more easily, we think, be read as a general treatise on otology than as one dealing especially with children, for he describes sabre cuts as a cause of extradural abscess, although he certainly says they are rare in childhood, a statement with which we are thoroughly in accord. But he is certainly not very clear in describing the connexions which may occur between catarrhal and otosclerotic changes, nor about their differential diagnosis. This subject is a particularly difficult one, and it is a mistake in such cases to be too dogmatic. It is very interesting to notice that in the preface Dr. Bedell suggests that otosclerosis may be present in utero.

We congratulate Dr. Bedell on the excellence of the majority of the illustrations. These are practically all original and very clear and well executed. The book is admirably got up, though, like many American books, it is rather weighty. The best portions of the book are those dealing with the affections of the ear in general diseases, to be found in the final chapters. We cannot help feeling that, although one would be justified in praising this work on diseases of the ear in children as a desirable acquisition, in future editions it is capable of being transformed into a work on general otology which would be very useful to practitioners of general medicine.

A Manual of Bacteriology, Clinical and Applied.

By R. TANNER HEWLETT, M.D. Lond., F.R.C.P. Lond., D.P.H., Professor of Bacteriology in the University of London; Lecturer on Bacteriology, London School of Tropical Medicine, &c. Fifth edition. London: J. and A. Churchill. 1914. Pp. 668. Price 10*s.* 6*d.* net.

IT is needless to review in detail or to describe the character and arrangement of this well-known and popular text-book of bacteriology, which has now reached its fifth edition. Suffice it to say that the reader who approaches bacteriology from the standpoint of the medical student, the practitioner, or the medical officer of health will find all that he requires in this work. This edition has been very thoroughly revised, and the alterations and additions, though small, are very numerous, and suffice to bring the information up to date. Fortunately, also, the effect has been to reduce the book slightly in size, though this is in part due to alterations in type.

In the general portion of the book there are some changes, such as the introduction of Dobell's classification and his views on the nucleus, while in connexion with anaphylaxis Dale's striking experiments are given. In the chapters dealing with specific organisms the principal changes are found in those concerned with the streptococci, B. anthracis, B. tuberculosis, B. lepræ, B. typhosus, and Sp. choleræ. Organisms resembling the anthrax bacilli are described, and some of the later work on disinfection in connexion with this disease is given. Spengler's views on the existence of two types of human tubercle bacilli are introduced, with their possible bearing on the interpretation of cases of human tubercle caused by the bovine type of bacillus—cases which the author seems to regard as of relatively slight importance. Henderson Smith's classification of the non-lactose-fermenting bacilli has replaced Löffler's grouping of the typhoid-colon bacilli, while there is an increase in the number of types of dysentery bacilli which are recognised. Further work on the hæmolytic properties of the cholera spirillum is introduced. In the previous edition the increasing importance of the protozoa was recognised, so that the changes in this portion are such only as are required by recent additions to our knowledge. The classification of the yeasts has been altered, and sporotrichosis and thrush are now grouped with the hyphomycetes.

The book, as were the previous editions, is well produced.

Practical Prescribing, with Clinical Notes.

By ARTHUR H. PRICHARD, M.R.C.S. Eng., L.R.C.P. Lond. London: Henry Frowde. 1913. Pp. 307. Price 6*s.*

Mr. Prichard has adopted the plan of epitomising a number of cases to illustrate the effects of various drugs. These are shown side by side with the prescription sheet and clinical notes. This is a good practical plan and should prove interesting and instructive to students. For example, the course of a case of acute gout is described day by day, together with the treatment adopted and the prescriptions which were given, the reasons for using the various therapeutical measures being fully discussed. An attack of influenza is similarly considered. The various systems of the body are then taken in order, the remarks being based on illustrative cases. The therapeutic methods are on the whole sound and practical. A typical case of mitral regurgitation with failing compensation is described, and stress is rightly laid on the value of rest in such circumstances, and the administration of digitalis is explained at length. The treatment of diseases of the stomach is well given, an interesting case of cyclic vomiting and one of "habit vomiting" in a child being discussed.

We think this work will be found useful in general practice and to students when doing their ward work, and more especially to those who wish to obtain practical knowledge in prescribing.

The Treatment of Neurasthenia.

By Dr. PAUL HARTENBERG. Translated by D. ERNEST PLAYFAIR, M.B., M.R.C.P. Edinburgh, Glasgow, and London: Henry Frowde and Hodder and Stoughton. 1914. Pp. 284. Price 6*s.* net.

THE very number of books on the psychoneuroses may bewilder the practitioner from the multitude of counsels therein contained. Their variety is sure proof of the absence of any specific for the treatment of neurasthenia and allied conditions. Each successful physician advocates his own methods, for in his hands they lead to the maximum of results. Whether they will do so when applied by others is another matter; the physician does not allude, as a rule, to the personal factor when summarising his own achievements in therapeutics. Dr. Hartenberg's book, however, will meet with the approval of the average practitioner of medicine. It is wise without being pedantic, and practical without being too comprehensive. Some believe in the blunderbuss method of treatment, and load their weapons with every variety of shot in the trust that one or other will hit the mark. There is reason in the methods advocated by Dr. Hartenberg, however, and the reader will readily gather that he writes only of what he has practised and proved. His short, synthetic Chapter XIV., on the course to be followed in the treatment of a neurasthenic, could not, we think, be improved on: it contains the key to success. Another valuable chapter is on the manner in which every neurasthenic should be studied and examined.

Some successful physicians and practitioners of psychotherapy are unable to communicate the secret of their results to others, though with the best will in the world; possibly they themselves are not precisely acquainted with the elemental factors underlying their attainment of results. Dr. Hartenberg is able to indicate the signposts along the *via regia* of successful treatment of neurasthenia, and we heartily commend his book to the attention of the medical profession. The translation reads well, and we can testify to its accuracy in thought and language.

Text-book of Local Anæsthesia for Students and Practitioners.

By Professor Dr. GEORG HIRSCHEL, Heidelberg. With introductory preface by Professor Dr. WILMS. Translated by R. E. S. KROHN, M.D. Lond. With 103 illustrations in the text. London: John Bale, Sons, and Danielsson. 1914. Pp. 181. Price 8*s.* 6*d.* net.

THE chief merits of this book lie in the illustrations, which are numerous, well executed, and full of detailed information. The book, indeed, may well be regarded as arranged round these graphic representations of the various local procedures described and the sites over which they are carried out. There is but little general description of the principles involved in local anæsthetisation or even

of the general technique and management of cases, but as a pictorial guide this work would be invaluable to anyone gaining his experience in local methods of anæsthesia. And the pictures are, of course, enhanced in value by the descriptive text. The book begins with a historical survey of local anæsthesia, and a short section is devoted to indications and contraindications for the method. The use of morphia in conjunction with local anæsthetics is strongly recommended. Novocaine in 1 or 2 per cent. solutions, to which suprarenin is added, is the generally recommended anæsthetic.

It is evident that local anæsthetics are far more widely used at Heidelberg, and probably in Germany generally, than is the case in this country. One reason for this, no doubt, is that less attention is paid there to the practice of general anæsthesia, and no body of men is to be found comparable to the specialists attached to the large hospitals in Great Britain who make the administration and teaching of anæsthetics their sole work. Dr. Krohn has done his work as translator well.

Surgery of the Vascular System.

By BERTRAM M. BERNHEIM, A.B., M.D., Instructor in Surgery, the Johns Hopkins University, Baltimore. With 53 illustrations in the text. Philadelphia and London: J. B. Lippincott Company. Pp. 104. Price 12*s.* 6*d.* net.

THE surgery of the blood-vessels will become of greater importance, but already we see that, though it is but at the beginning of its growth, it is of considerable value. There is, however, a danger that its progress may receive a check from its indiscriminate and unskilled practice by those who have not appreciated the niceties requisite to attain success. This little book contains full and careful accounts of the technique which has been found necessary for blood-vessel surgery. Chapters deal with the suture of vessels, transfusion, transplantation, the surgery of aneurysm, and the surgery of the heart.

The book is eminently practical; it gives the surgeon who is new to this branch of surgery just the information that he needs, and we consider that it forms a trustworthy guide to the surgery of the vascular system, but the surgeon must not overlook the fact that considerable practice is essential before reasonable certainty of success can be attained. The illustrations are very good.

LIBRARY TABLE.

The Progress of Eugenics. By C. W. SALEEBY, M.D., Ch.B., F.Z.S., F.R.S.E. London: Cassell and Co. 1914. Pp. 259. Price 5*s.* net.—This book is primarily a propagandist essay rather than a contribution to science. The author's aim is to exhibit the eugenic ideal in its pure form, disembarrassed of all those extraneous and even conflicting objects which tend to create prejudice against it and to hinder its progress. Thus he complains that its advocacy has been made a pretext for the inculcation of class prejudice, has been used as an argument against love, as a reason for unjustifiable operations, for the neglect of infancy, and "for wild talk about lethal chambers and stud farms." Dr. Saleeby insists that none of these things belong to the true conception of eugenics; they are, on the contrary, he asserts, the outcome of a false and shallow materialism with which its aims have nothing in common. It is, he points out, an abuse of Galton's distinction between "nature" and "nurture" to exalt one set of conditions at the expense of the other, the amelioration of both being equally indispensable to that of the race. Hence there is no real conflict between the aims of the eugenist and the social reformer, which are on the contrary complementary and interdependent. The whole of nurture is in fact admitted by the second clause of Galton's definition of eugenics as "the science which deals with all influences that improve the inborn qualities of a race; also with those that develop them to the utmost advantage." The first main division of the book deals with principles, the second with the search for knowledge, and the third with the progress of primary eugenics, positive, negative and preventive. One of the most interesting parts of the last-named section is that dealing with the problem of "the impure dominant"—individuals personally normal, half of whose germ cells carry a defect. The book bears on every page evidence of wide knowledge and enthusiasm. It is, however, marred by a complacency, strangely alien to the spirit of that great man, the founder of eugenics, for whom the author expresses so much admiration.

A Complete Handbook of Midwifery for Midwives and Nurses. By J. K. WATSON, M.D. Edin. Third edition, thoroughly revised. With over 150 illustrations. London: The Scientific Press. 1914. Pp. 360. Price 6*s.* net.—The author thinks that in a text-book of this kind some of the subjects treated should be those which a midwife would not have anything to do with in the practice of her art. He has therefore endeavoured to give such knowledge as can be assimilated by one who has not had the advantage of the scientific training of the medical student. He thinks that the midwife who has taken pains to become conversant with the theory of the subject will be more ready to appreciate her own dependence on medical assistance in times of difficulty. His aim, therefore, has been "too much" rather than "too little." This third edition has been thoroughly revised and some new illustrations added. The book is a good one of its kind, and although all will not agree with the views of the author as to its scope, as it concerns nurses and midwives only, yet they must admit that he has performed his task well.

The Royal Dental Hospital of London Annual Reports for 1913. London: John Bale, Sons, and Danielsson. Pp. 128. Price 5*s.*—The original communications in this volume reach a high standard of excellence. Mr. J. G. Turner, in an able paper on dental caries from a clinical standpoint, discusses the incidence of caries in the lower animals, the relation of the disease in man to food, and the mode of attack and progress in the individual. The paper is a very thoughtful and careful piece of work. Dr. Dudley Buxton contributes a paper on the nitrous oxide gas, and Mr. G. H. Berwick, in a thoroughly practical communication, deals with the treatment of difficult artificial dentures. Mr. J. F. Colyer writes on the subject of periodontal disease, and insists on the important relationship between mouth-breathing and the disease. He shows also that in some patients there are considerable toxic effects where the marginal gingivitis is marked and there is but little bone destruction. Dr. H. W. C. Austen records two extremely interesting cases of round-celled sarcoma of the mandible. The reports clearly show that dental surgery has taken its proper place in scientific medicine.

MISCELLANEOUS VOLUMES.

A BATCH of books lies before us having reference to various aspects of the sex problem, which seems to press so insistently on the present age.

With regard to the teaching of sexual physiology and hygiene, an admirable little book that aims to express in simple terms, understandable by pupils of elementary schools, the principal facts of growth and development, first in plant and then in animal life, and gradually to educe the relation of these facts and principles to human life, is *Plant and Animal Children: How they Grow* (London: D. C. Heath and Co., and George G. Harrap and Co. Pp. 230. Price 2*s.* 6*d.* net), by ELLEN TORELLE, M.A. The plan is excellent and will undoubtedly fulfil its express aim of making clear the ideas of evolution, heredity, variation, the effect of environment, and the evolution of sex without ever mentioning the names. These will be self-explanatory when they are encountered later by persons already well grounded in the ideas they represent. By the scheme of instruction adopted in this book the child will gradually and naturally be led up without any shock to the understanding of its own sexual nature.——*The Biology of Sex for Parents and Teachers* (same publishers. 1913. Pp. 105. Price 2*s.* net), by Professor T. W. GALLOWAY, Ph.D., is a more advanced and detailed account of sex facts intended to aid teachers in giving sex instruction. The author points out that, while the common objection is true that mere knowledge does not insure right conduct in any department of life, of those individuals who know the facts in a given situation a larger percentage make right choices than in the case of a mixture of informed and ignorant persons taken at random. We can approve the principles of sex instruction laid down in this book—that such instruction must be properly graded; that it must be different for boys and girls (who should be taught separately, at any rate after the broad impersonal studies of the preliminary classes in physiology); that it should follow on curiosity, but should precede the actual need of instruction, and should be incidental to other teaching; and that mere biology is not enough, all possible help from psychology, sociology, ethics, and religion being accepted.——*Hygiene for Girls: Individual and Community* (same publishers. Pp. 257. Price 2*s.* 6*d.* net), by FLORENCE HARVEY RICHARDS, M.D., is, on the whole, a commendable book. In view of the general teaching of elementary physiology, attention is mainly directed to its applied form—viz., hygiene. The book is in two parts, individual hygiene and communal hygiene. Both are good, but in the second part, while especially commending the sane restraint of the chapter on alcohol, we must take exception to the routine circulation of certain common statements in regard to tobacco, which are unsupported by fact—at least, in this country. The bald statement "Cigarettes are much more injurious than pipes or cigars because the smoke is inhaled" would be more correct if stated "when the smoke is inhaled." Thousands of habitual cigarette smokers never inhale; in fact, we should say that in this country inhaling is the exception. Further, we must altogether demur to the assertion, so often made in the United States, that "opium is common in cigarettes." Many examinations of cigarettes have been, and are being, made from time to time in THE LANCET Laboratory, and opium has never yet been found. Lastly, the statement that "nicotine ..... is responsible for the bad effects of tobacco," is only partially true. To some slight extent it is so; but it is probably a far less injurious factor than the carbon monoxide and the pyridin bases which are the products of incomplete combustion. It is immoral, however virtuous the motive, to spread broadcast common delusions which, if they ever had any presumptive ground, have been completely disproved. The chapter on patent medicines contains some useful information that is worthy of general dissemination. The concluding chapter on the hygiene of the reproductive system is suitably written.——The caution requisite in regard to relying too entirely on the physiological factor in sex education, to the neglect of the moral factor, is well emphasised by the Rev. FRANCIS HEIERMANN, S.J., in a reprint of an article from the *Lancet-Clinic* of Cincinnati, U.S.A., on the *Teaching of Sex Hygiene in our Schools*. Father Heiermann, while admitting that under modern conditions some instruction in sex hygiene is useful and necessary, maintains that after well-guarded instruction given in private by the parent, or at the special request of the parent by a competent physician or spiritual guide—as he puts it elsewhere, "Some individual teacher may be capable of giving the desired information privately to some individual scholar, with tact and in a few words"—there should follow a policy of reticence. The cultivation of purity must be based on character building and will power, and "how this will power can be cultivated without religious motive and without religious influence is incomprehensible." He quotes the witty saying, "It is now *sex* o'clock in literature and art."——The awakening towards the evils of the venereal diseases is the subject of M. A. CORBETT-SMITH'S *Problem of the Nations* (London: John Bale, Sons, and Danielsson, Limited. 1914. Pp. 107. Price 1*s.* 9*d.* post free). The author, who is not a medical man but a barrister, describes his book as a plain straightforward account of the greatest curse known to civilisation. As lecturer in public health law to the Royal Institute of Public Health he has found the doors of official statistical bureaux and Ministries of Health all over the world unlocked to him, and the names of the several eminent authorities, British and foreign, for whose "courteous and willing assistance" he returns thanks in his preface, lead us at the outset to expect a carefully reasoned statement of the human and sociologic aspects of these diseases. The broad facts are dogmatically summed up in his letter to his godson, which closes the book, while full details and figures on which that summary is constructed are given in the body of the book. As the author says, he has "deliberately set to work, in the guise of a journalist, to pick the brains of the specialists, to put this and that fact together and to build a composite whole"; and regarded from that point of view he has accomplished his aim creditably.

JOURNALS AND MAGAZINES.

The Psychoanalytic Review. A Journal Devoted to an Understanding of Human Conduct. Edited and published by WILLIAM A. WHITE, M.D., and SMITH ELY JELLIFFE, M.D. Issued quarterly. $5 per volume. The Journal of Nervous and Mental Disease Publishing Company, New York. No 1, November, 1913.—Dr. C. G. Jung, of Zürich, contributes an article on the theory of psycho-analysis. It consists of his lectures on the subject delivered in America in September, 1912, and is continued in the next number of the *Review*. Here the reader will find clearly stated Dr. Jung's position in regard to Freudism. He explains how he has moved away somewhat from his original conception of sexual libido, allowing that many important functions have no longer a sexual character, although originally derived from the instinct of propagation. The whole process of development consists in a desexualisation of the libido, which is conceived of rather as energy manifesting itself by vital processes.—Dr. L. E. Emerson contributes a short report of a case of self-mutilation in a young woman of 24. In this case the facts were well known to the patient, and no special psycho-analytic technique was necessary to elicit them; only when they are unknown to both patient and examiner is a special method desirable.—A case of hysterical amaurosis, in which the cause of the blindness was shown to be the patient's desire never to see his wife again, is reported by Dr. Thaddeus H. Ames.—Dr. Smith Ely Jelliffe contributes the first instalment of a useful and practical discussion on the technique of psycho-analysis.—There is a critical digest on some Freudian contributions to the paranoia problem from the pen of Dr. Charles R. Payne. It also is continued in the next number.——No. 2, February, 1914.—Dr. Jung continues his lectures on the theory of psycho-analysis. He devotes some attention to the objections that have been raised as to the Freudian assumption of the significance of the unconscious.—The well-known story of the Wildisbuch crucified saint is discussed by Dr. Theodore Schroeder from the point of view of the erotogenesis of religion.—Professor Knight Dunlap contributes a paper on the pragmatic advantage of "Freudo-analysis," in which he maintains that sexual associations are most admirably adapted for the purposes of psycho-analysis. It is in many cases unnecessary to determine the cause of the psychoneurotic condition in order to cure it. Hence the cures resulting from Freudian treatment have no value as evidence in support of Freudian dogmas.—There is a translation in both numbers, to be continued, of Dr. Franz Riklin's monograph on wish-fulfilment and symbolism in fairy tales.—The papers of the *Internationale Zeitschrift für aerztliche Psychoanalyse*, *Zentralblatt für Psychoanalyse* and *Imago*

are abstracted in the *Review*. It will be seen that the scope of the *Review* is wide and ambitious. It deals with much more than the strictly medical aspect of psycho-analysis, and appeals to the student of all phases of psychology.

Parasitology. Edited by G. H. F. NUTTALL, F.R.S., and A. E. SHIPLEY, F.R.S., assisted by EDWARD HINDLE, Ph.D. Vol. VII., No. 2. June, 1914. Cambridge University Press. Price 10*s*. net. Yearly subscription 30*s*.—The Trematode Parasites of North Queensland. II. Parasites of Birds, by William Nicoll, is a further account of the trematodes obtained by the author during the examination of numerous species of Australian birds. In the present paper no less than 11 new species are described belonging to the genera Opisthorchis, Orchipedum, Echinostomum, Echinochasmus, Clinostomum, Hæmatotrephus, and Platynotrema, the latter being a new genus, founded for the reception of two species occurring respectively in the gall-bladder and liver of a stone-curlew.—An Epidemiological Study of Filariasis in Ceylon, by P. H. Bahr, contains useful information regarding this disease, together with a map showing its distribution in Ceylon. Only Filaria bancrofti was found, and here it is definitely nocturnal in its habits. In the endemic areas its distribution is apparently of a most capricious character, for in some of the villages at least 26 per cent. of the adults are infected, whilst in neighbouring villages the inhabitants are quite free from the parasite and its associated diseases.—Studies on Malaria in Ceylon, with Special Reference to its Prevention in Agricultural Districts, by P. H. Bahr, is mainly concerned with malaria in Kurunegala. In this town malaria is mostly of the quartan type, and at least six well-known malaria-conveying anophelines were found. The paddy fields are the main and most extensive breeding areas of these mosquitoes, and therefore the author advises that wet cultivation within town limits should be forbidden, as being the only means calculated to abolish endemic malaria. This measure presents no insuperable difficulties, as may be seen from the perusal of Appendix V. of the paper, where it is definitely stated that the substitution of cocoanut for paddy cultivation is perfectly feasible, and is indeed commercially a profitable venture. This interesting paper is illustrated by maps and numerous plates, which give one a very good idea of the conditions affecting the transmission of malaria in Ceylon.—Observations on the Larvæ of Fleas, by A. W. Bacot and W. G. Ridewood, contain detailed descriptions of the external features, and also notes on the habits, of the larvæ of six species of fleas—viz., Pulex irritans, Xenopsylla cheopis, Ctenocephalus canis, Ceratophyllus fasciatus, Ceratophyllus gallinæ, and Heptopsylla musculi. Figures are given illustrating the various larvæ and also tables in which are summarised the differences in the characters of the larvæ of the six species investigated. This paper will prove very valuable to plague investigators who may be concerned with the rearing or identification of fleas.—The Posterior Stigmata of Dipterous Larvæ as a Diagnostic Character, with Especial Reference to the Larvæ Incriminated in Cases of Myiasis, by Malcolm Evan Macgregor, is a most useful attempt to classify dipterous larvæ according to the characters of their posterior stigmata. Both physicians and entomologists have long felt the want of some method of determining the immature stages of flies, for in cases of myiasis it is rarely possible to rear the larvæ to the adult stage. The author recognises two types of stigmata named respectively the schizotreme and ptychotreme types. Examples are then described of the stigmata of various common diptera, the differences between them being well shown in the excellent photomicrographs accompanying the article.—The Occurrence of Oxyuris Vermicularis in the Human Vermiform Appendix, by J. Alexander Innes and A. Elmslie Campbell, contains the results of a study in Aberdeen of 100 unselected cases of appendicitis, in which the appendices operated on were examined for the presence of intestinal parasites. 17 per cent. of the appendices were found to be infected with Oxyuris vermicularis, but no other parasites were found. Normal appendices showed a much lower percentage of infection, but the proportion is probably higher in children than in adults. The recurrent type of appendicitis was found to be most frequently associated with oxyuris infection, and the authors are of the opinion that there is probably a clinical type of oxyuris appendicitis. The suppurative type of appendicitis has practically no relationship to infection with this parasite. Trichocephalus trichiurus is not often found in the appendix in Aberdeen district, the authors not finding a single example during the examination of over 100 appendices.

British Dental Journal.—The issue of this journal for July 1st contains an abstract of Mr. J. Howard Mummery's paper before the Royal Society on the Process of Calcification in Enamel and Dentine. The author shows that the process is in great part a physical phenomenon, and that the actual deposit occurs in the form of calcospherites. In the formed tissues the shape of the calcospherites is not retained, and it is suggested that as phosphates are added from the blood the calcospherites break down and the disintegrated particles form the finally consolidated enamel. Dr. H. Vallow contributes an article on Tuberculosis in Relation to Dental Disease, and considers that every tuberculous patient should have the teeth efficiently attended to and that the money thus spent would be economically used.

CONFERENCE OF THE NATIONAL ASSOCIATION FOR THE PREVENTION OF CONSUMPTION.

THE Sixth Annual Conference of the National Association for the Prevention of Consumption and other Forms of Tuberculosis was held at Leeds on July 7th and 8th. The Lord Mayor of Leeds, Mr. E. A. BROTHERTON, presided over a well-attended assembly. After the Lord Mayor had welcomed the delegates, Dr. M. E. SADLER, Vice-Chancellor of the University, said that one of the highest duties and most hopeful tasks of a university was to share in the campaign for social welfare. He hoped the University of Leeds would be given means to develop in conjunction with the Leeds Infirmary its medical and pathological researches. He suggested that the economists present by the influence of their teaching might help the country to realise that there were changes which, by liberating the human soul and giving it a sense of greater power and opportunity, might richly repay by their results the initial cost of introduction. The University might also send out yearly a body of young people illuminated by knowledge and possessed of a sense of the duty of public service.

Housing and Tuberculosis.

Sir WILLIAM YOUNGER, in a paper on the House in Relation to Tuberculosis, said that so far as the evidence went the house was clearly a dominant factor in tuberculosis. He referred to his recent observations as a member of the Royal Commission on Housing in Scotland, and said it seemed heart-rending to send persons to sanatoriums if in a few months they had to return to surroundings largely responsible for the original breakdown. He cited the experience of Edinburgh and Glasgow to demonstrate the relation between congestion and insanitary housing and the tuberculosis rate. And the same story could be told for the country. He referred to the great increase in tuberculosis in the islands of the west coast of Scotland since the beginning of the nineteenth century, which was ascribed to the importation of the bacillus by servants returning home, the development of which was favoured, in spite of the open-air life, by the insanitary conditions of the housing there. Edinburgh and Liverpool, he said, showed what could be done by rehousing schemes in reducing the tuberculosis rate.

The Marquis of SALISBURY said that the most important point in building cottages was to build enough of them to avoid overcrowding with its injury to health and morals. He gave some practical hints on cottage building, and said that the garden city limit of ten houses to the acre had had excellent results on the children's health.

Sir ROBERT W. PHILIP said that the hope for the tuberculosis problem lay in projecting a searchlight into the home along scientific and humane lines, not by the inquisitorial visit of a lay officer, no matter what powers he might be endowed with. The future mothers and fathers of the race must be educated by skilled, sympathetic teachers. Men and women were wofully ignorant of the larger measures of healthy living and self protection. The object lesson of the sanatorium must be enforced in the home.

Mr. W. CARBY HALL, chairman of the development committee of the Leeds corporation, described some typical cottage designs which could be built in Leeds at the present price of building materials and labour for about £160.

Dr. J. SPOTTISWOODE CAMERON, medical officer of health for Leeds, pointed out that the phthisis mortality in Leeds

had been steadily decreasing. At the Census of 1911 6 per cent. of the houses in Leeds had more than two persons to a room. During the last three years the new phthisis cases reported numbered 3472, and of these 57·9 per cent. lived in houses in which two or more persons occupied one room. Overcrowding in Leeds, as measured by two persons to a room, was greater among those suffering from phthisis than in Leeds as a whole, and among the patients in these crowded houses more than half had not a room, and nearly half not even a bed to themselves.

Colonel G. KYFFIN-TAYLOR, M.P., Chairman of the Liverpool Housing Committee, said that Liverpool's experience showed that it was no use tinkering with slums, which must be swept off the face of the earth; and because slum dwellers were unable as a separate family to obtain a separate house, the municipality must see that the people were rehoused. After 12 years' work in the Scotland and Exchange divisions of Liverpool, in spite of all that sanitary science could do, the average mortality for the three years ending 1893 was in the Scotland division exactly the same as in 1873—viz., 35·1 per 1000, while in the Exchange division it had actually increased from 34·3 to 36·7 per 1000. The death-rate began to fall when the corporation began to clear and rebuild, the average death-rate for the three years ending 1913 being in both divisions 29·5, a saving of nearly 6 per 1000. Last year it was for Scotland division 27·5 and for Exchange 28·41. After the municipality began to make bold clearances, combined with rehousing, a fall in the tuberculosis mortality rate of 38 per cent. took place in 17 years.

Tuberculosis in Children.

At the afternoon session Professor R. LAWFORD KNAGGS, of the University of Leeds, read a paper on Tuberculosis in Children from a Surgical Point of View. He said that whatever surgical treatment might be necessary at no time ought medical treatment to be omitted, for it was essential in every case of tuberculosis. Surgical procedure was based on one of two principles, either the removal of the disease focus or fluid alone, or cutting wide of that through surrounding healthy parts. The first principle was the only one admissible in certain cases—tuberculous ascites, pleuritic effusion, spinal and some glandular abscesses, and some cases of tuberculous inflammation of bone. The second, by dissection through the surrounding healthy tissues, designed to obtain a clean wound free from infected material, was suitable where the tuberculous trouble was confined within a definitely capsulated organ preventing rapid extension. Many cases of tuberculous glands and renal tuberculosis were best treated thus, and also the large group of bone tuberculosis. In aspirations of abscesses and erasion of joints the first principle was involved; in excisions and amputations the second.

Mr. H. J. GAUVAIN, medical superintendent of the Treloar Cripples' Hospital, Alton, considered the time had come when the knife could be absolutely dispensed with in tuberculosis, except to make good defects arising out of the former treatment. The conservative method of restoring and preserving the part attacked was the treatment of the future. That treatment needed large institutions in which it could be carried on. It was far more neglected in this country than on the continent. Crippling from tuberculosis was almost entirely preventable. He showed lantern slides demonstrating the treatment followed at Alton.

Mr. J. F. DOBSON, of Leeds, concurred in discouraging operative intervention, and deplored the scarcity of beds whereby improved methods of treatment would become possible. This was due solely to lack of funds.

Mr. H. J. STILES, surgeon to the Edinburgh Children's Hospital, said that in Scotland 75 per cent. of surgical tuberculosis among children was of bovine origin. In 37 per cent. of his operative cases in children there was histological evidence of tubercle in the tonsils, mostly the bovine bacillus. He urged inspection of milk adequate to secure a pure milk-supply.

Professor SIMS WOODHEAD said every single measure—proper housing, ventilation, adequate rest—against any one of the factors of tuberculosis was of great importance. He asked them as public health authorities to pay attention to each factor mentioned by the various experts.

Dr. NATHAN RAW, of Liverpool, also emphasised the importance of milk as a causative factor.

Alderman ANTHONY SHELMERDINE, of Liverpool, described the electrical sterilising process for milk in use in Liverpool.

In the evening Dr. NATHAN RAW delivered the popular lecture on tuberculosis in association with the Tuberculosis Exhibition before a large audience, and particularly emphasised the need for suppressing the spitting nuisance.

The Prevention and Treatment of Tuberculosis.

On the second day Sir WILLIAM OSLER read a paper in which he divided the tuberculous public into three classes. In the first nearly all of those present were included, for probably some small tuberculous focus could be found in 90 per cent. of all people. That we did not all die was due to the fact that the human race had attained a certain measure of immunity. The second group comprised those in whom the disease was active enough to produce symptoms, but in whom cure was still possible, with restoration to working health. The third group consisted of the doomed, in whom progression took place to a more or less remote end. This was the fate of between 50,000 and 60,000 persons a year. A single problem was linked with each group. In the first it was to give such health of tissues to every unit, child or adult, in the kingdom, that the parasites might be as surely dealt with as the oak dealt with those on its bark. When the children enjoyed their proper heritage of health, the workers had a living wage, the houses were homes, and the nation spent in food what was now being spent in drink, there would be millions instead of hundreds of thousands of immunes. The problem of the second group concerned the 250,000 to 300,000 people with cough, loss of weight, fever, bacilli, and definite signs in the lungs or obvious involvement of some other part. There were three essentials to cure—education, control, and a rigid regimen. These were best obtained in a well-conducted sanatorium, or failing that by institutional treatment. The primary need in every district was a census of the cases. Patients must be made to realise that a long, hard, uphill fight was before them, but with rigid and effective control a regimen as strict as that of a sanatorium might be carried out at home. With regard to the third group, nothing was more important than the care of these chronic incurable cases. Safe care was almost impossible in houses, and an addition to the law was necessary by which segregation could be provided for and where necessary enforced.

On the various aspects of Domiciliary Treatment, papers were read by Dr. H. DE CARLE WOODCOCK, Dr. ARTHUR DENNISON, Dr. CECIL WALL, Dr. H. J. CAMPBELL, and Mr. H. W. MCCONNELL. Dr. EDGAR L. COLLIS and Miss EMILY SADLER dealt with the Factory in Relation to Tuberculosis, Dr. T. D. LISTER with the Home in Relation to Tuberculosis, and a general discussion ensued, in which Dr. HALLIDAY SUTHERLAND, Dr. A. CHRISTY WILSON, Mr. HARRY KEW, Major DOD, Mr. J. SULLIVAN, Dr. W. OSBORNE GREENWOOD, and the Chairman, Lord GLENCONNER, took part. Votes of thanks were passed to the Lord Mayor, the University and its Vice-Chancellor, the Infirmary Board, &c.

CONGRESS OF THE ROYAL SANITARY INSTITUTE.

THE twenty-ninth Congress of the Royal Sanitary Institute was held at Blackpool on July 6th to 11th, under the presidency of the Earl of DERBY. There was an attendance of upwards of 1000. Delegates appointed by over 230 authorities, including many of the over-sea dominions, were present, and there was a considerable proportion of women. Both the scientific and social arrangements were excellent, and the Congress was a great success. In the course of the Earl of Derby's address, delivered on the opening day, reference was made to health in its relation to the army. Whereas some years ago the presence of the military was regarded with misgiving, more especially on account of contagious disease and the soldier's easy carelessness, he urged that now not only could this feeling be no longer reasonably entertained, but also that individual soldiers, by their wholesome training in hygiene, constituted after their discharge healthy units of the community, from whom, indeed, their civilian associates could learn many useful lessons.

Discussions through the week ranged themselves into sections and conferences. The sections included sanitary science and preventive medicine, domestic hygiene, engineering and architecture, and hygiene of infancy and childhood.

The conferences concerned representatives of sanitary authorities, veterinary inspectors, medical officers of health, engineers and surveyors, sanitary inspectors, and port sanitary authorities. The variety and range of discussion prevent, in a limited space, notice being taken here at all commensurate with the value of the subjects treated. The effects of the later trend of legislation, especially as regards National Insurance, town planning, and care of children naturally came in for very general notice in many sections.

Working of Insurance Act.—Juvenile Employment.

The paper by Dr. J. NIVEN, medical officer of health of Manchester, on the Working of the Insurance Act attracted a large audience. He said that this far-reaching measure had not produced any great immediate effect on public health administration except as regarded tuberculosis, though it promised in the future to do so. He noted that so far provision of machinery had prevented local authorities from investigating the exact workings; nor had sufficient time elapsed to allow the determination of incidence and distribution of sickness. After explaining Manchester's provisions for tuberculosis, he questioned the value of the policy of the 6*d*. for domiciliary treatment. He was of opinion "that the effect of the sanatorium clauses of the Act will ultimately be that a great reduction in tuberculosis will occur, but time is required to complete the machinery." The Act, he considered, was in many ways imperfect, but it represented what it had hitherto been possible to accomplish.—In the discussion many points were raised, such as the lack of supervision of children suffering from tuberculosis, the abuse of the union infirmaries by recipients of pensions, and the interest with which England's experiments in insurance are regarded by our colonies.

In the same section a valuable paper was read by Dr. W. STEWART STALKER, medical officer of health of Swinton, in which he referred to juvenile employment. He said that medical inspection in schools had succeeded in obtaining partial or complete school exemption for children under 14 on account of physical disability; for 1912, 246,000 children were thus exempted. But following this step nothing more was done to follow these cases up when they sought employment. It was true that if they entered employment under the sphere of the Factory and Workshop Acts medical supervision again guarded them; but, as a matter of fact, only a proportion (133,000 out of 246,000) sought such employment. Consequently the remaining 113,000 children, already noted as physically questionable, passed uncontrolled into occupations in many cases positively dangerous. Dr. Stalker thought it desirable to extend the range of compulsory notification on the lines of the Factory and Workshop Acts, to coördinate the work of the school medical officers with the factory doctors, and by these means to lessen the chances of children engaging in work incoördinate to their physical capacity.

Other Papers and Discussions.

In other sections the value of training for mothers and the care of early infant life received much recognition. Professor H. R. KENWOOD emphasised the importance of education of mothers. He said that an extended and coördinated scheme was required. Some hygiene might be taught in schools, but later training was of more value. Evening classes should be held for young married women, and local authorities should do everything to bring the same into notice and popularity. Finally, the present midwives and medical men could do far more for antenatal and infant hygiene.

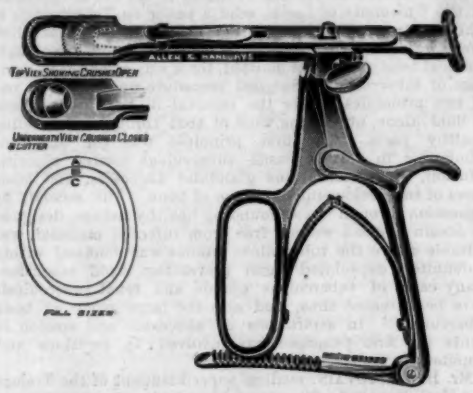
Sir HENRY TANNER discussed White Lead and its Disuse for Painting. Mr. T. G. LUMB on Town Planning and Garden Cities, and Mr. SEARLES-WOOD and Mr. WICKFORD POTTER on the Housing of the Agricultural Labourer dealt with matters indirectly concerning practical medicine.—Mrs. CLOUDESLEY BRERETON read an interesting paper upon the Modification of Basement Houses.—Professor S. DELÉPINE and Dr. A. GREENWOOD described their observations upon the Action of some Metals upon Certain Water and other Bacteria. They found that lead, iron, and aluminium, which were acted upon by water, were without appreciable effect (lead) or had only a slight inhibitory effect (aluminium and iron) upon bacterial growth. On the other hand, copper, silver, zinc, and mercury had a powerful inhibitory action; in smaller doses, however, these agents led to increased growth of bacteria. All bacteria were not affected in the same way or to the same extent. While soft water acting upon copper and lead was very rapid, the bacterial contents were not affected by the passage of lead into the water; but copper passing in, was attended with complete or almost complete sterilisation in about half an hour.—Port sanitation was discussed by Dr. W. M. WILLOUGHBY on Rat Plague and the Powers of a Medical Officer of Health to Cope Therewith; by Dr. HERBERT WILLIAMS on Insanitary Conditions on Shipboard; and by Dr. J. HOWARD-JONES on Diseases Incident upon Seamen and their Prevention. These form some of the most suggestive and valuable of the papers considered during the week.

An interesting health exhibition was well patronised, and the abundant facilities for excursions and amusements upon which Blackpool can rightly pride herself ensured success for the social amenities of the Congress.

New Inventions.

A NEW TONSILLECTOME.

THIS instrument was designed for the complete enucleation of tonsils, removing them with their capsules from their beds with practically no loss of blood. The method used is approximately that of Sluder, but in addition to the one cutting blade there is a crushing blade which enters between the anterior faucial pillar and the tonsil and effectually crushes all vessels between the capsule of the tonsil and its bed. When the crushing blade has been pushed home it remains locked in this position by the



Hagedorn catch at the base of the handle of the instrument. A light pair of fixation forceps is then applied to the protruding tonsil (i.e., on the uvula side of the crushing blade) and the cutting blade, which enters between the crushing blade and the tonsil, pushed home. The tonsil is then lifted out on the fixation forceps. The crushing blade being still applied to the vessels which have been cut through may be left on for a few moments, and then gradually released by depressing the catch with the little finger. The method is a simple one. There is no bruising of the faucial pillars or surrounding tissues; no muscular tissue is removed, and in vigorous adults, where the risk of hæmorrhage may be great, it offers the safest possible way of preventing bleeding, in that all vessels which have been cut through can be held just as long as the operator pleases, and when released the proximal ends have been thoroughly crushed by the serrated edge of the crushing blade. The blades of the instrument are made in three sizes (see A, B, and C on the illustration), all fitting one handle, and the one chosen should be of such a size that the tonsil can be just comfortably pushed through the ring. I use a Doyen's mouth gag, but the gag should not be opened to its fullest extent as this tightens the faucial pillars unduly and diminishes the mobility of the tonsil. The fixation forceps are only necessary to prevent the tonsil from falling down when it has been isolated.

The instrument has been made for me by Messrs. Allen and Hanburys, Limited, 48, Wigmore-street, London, W.

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Upper Wimpole-street, W. L.R.C.P. Lond.

THE LANCET.

LONDON: SATURDAY, JULY 18, 1914.

Nurses' Registration.

RECENT events have once more brought the problem of nurses' registration into prominence, and it is desirable that every medical practitioner should consider the matter in all its bearings and form some definite ideas, both upon the general question and upon the particular measure which is now before Parliament. With regard to the general question, we suppose there are few of our readers who are not on principle in favour of some form of legislation which would standardise the training of nurses and regularise the conditions under which nursing is practised. To paraphrase the wording of the preamble to the Medical Act of 1858, "it is expedient that persons requiring nursing aid should be enabled to distinguish qualified from unqualified practitioners," and an Act is needed to regulate the qualifications of such practitioners. Some reform of this kind is, we think, called for in the interests of the public, of medicine, and of trained nurses themselves. But there are difficulties in the way of devising and promoting legislation which would achieve what is generally desired without introducing certain drawbacks, and these difficulties are rendered much more formidable by reason of the personal factor which has been imported into the controversy. It would naturally be more pleasant to pass over this aspect of the matter, but the fact seems clear that the present situation cannot profitably be discussed even in outline without admitting that a split exists and that its causes are largely personal as well as practical.

The Bill which was introduced into the House of Commons on March 3rd by Dr. W. A. CHAPPLE [1] is expressly designed "to regulate the qualifications of trained nurses and to provide for their registration," [2] and the instrument which it proposes for carrying this purpose into effect is a central nursing council called the General Council for the Registration of Nurses in the United Kingdom. This council would prescribe a curriculum, lay down a minimum standard of training, keep a register of those nurses who have passed the examination and secured the certificate approved by the council, and exercise disciplinary powers over registered nurses. No woman whose name is not upon this register would be allowed to claim that she has been trained at a hospital and is a qualified nurse. Thus on its surface this Bill, whose introduction into the House of Commons was permitted by 311 votes to 82, bears a certain likeness in general form and intention to the laws governing the registration of medical practitioners; and assuming that such a resemblance is desirable, it might be supposed that all the best elements in the world of nursing would combine to support a measure of this kind, and that medical men and hospital authorities would with one accord urge the Government to afford facilities for its speedy enactment. But such, of course, is not the case, and this was very clearly stated by the Prime Minister when he received a deputation of supporters of a similar Bill not very long ago. Moreover, it is noteworthy, if not significant, that among the present matrons and superintendents of nursing, who have very numerously signed a petition praying for facilities for the passing of the Nurses' Registration Bill, three only of the 12 great metropolitan hospitals with medical schools are represented. Whence, therefore, the opposition in some influential quarters, and the apathy in others, towards a measure whose avowed object is the benefit of the public through the encouragement of the best class of nursing by defining and safeguarding the status of trained nurses? The answer seems to be that this Bill, excellent in many respects as it is, is the product of one party only, and that within this party the leading spirits, who supply the driving force of the movement, are wholeheartedly committed to a certain line of policy which goes beyond the simple demand for State registration of qualified nurses. Thus there is reason for regarding the present situation not so much as a conflict between the supporters and opponents of State registration, as such, but as an encounter on a grand scale between those who assert and those who deny that it is possible to fix a time limit within which a nurse can be efficiently trained. We recognise that among the vigorous opponents of the Bill now before Parliament there are some, like Lord KNUTSFORD, chairman of the London Hospital, who declare themselves against State registration for nurses in any shape or form; but the underlying causes of the split are very generally supposed to be the personal factor and the question of a three years' curriculum for all nurses. Now from the nature and composition of most of the societies affiliated to the Central Committee for the State Registration of Nurses it was inevitable that any measure advocated by that body would contain provision for enforcing a minimum training period of three years. And so it is; as can be seen in Clause 12 of the present Bill, which is unmistakable upon this point, even if the constitution of the Central Council proposed in Clause 4 left any doubt of what to expect.

Here, then, is what must be regarded as almost an impasse. On the one side there is a determined body which has been working for years to secure something which, in theory at least, makes a

[1] THE LANCET, March 7th, 1914, p. 723, and March 21st, p. 868.
[2] Bill 88, Wyman and Sons, Fetter-lane, E.C., price 2*d*.

considerable appeal to the intelligence; while on the other side there is an equally determined body which makes out a strong practical case for leaving things very much as they are. And, indeed, so long as the London Hospital continues to serve the public and the medical profession so well in the matter of the nurses which it turns out, the advocates of State registration and a three years' curriculum merely weaken their cause by abuse of that institution. The only means by which, as it seems to us, a way out of the difficulty can be found is for the party of reform to recognise that the position cannot be stormed, although by "agreeing with thine adversary" some working measure of State registration might be got through Parliament.

Meat Inspection in the Argentine.

THE Sanitary Committee of the Corporation of the City of London have issued a valuable report made by their veterinary surgeon, Mr. T. D. YOUNG, and presented by their medical officer of health, Dr. W. J. HOWARTH, on the results of inquiries as to the conditions in which meat is obtained and inspected in the Argentine Republic. The object of the inquiry was to assist the City authorities in the duties of supervising the wholesomeness of the meat supply of London which fall to them at Smithfield market and in the large meat stores of the City. Its importance will be realised when account is taken of the fact that practically all the chilled beef which now comes to this country, and more than half of the beef which comes over frozen in quarters, is imported from the Argentine. Mr. YOUNG'S report is not unsatisfactory as a whole. The conditions of the Argentine estancias are well known to be extremely favourable for the rearing of fat cattle, and both handling and management previous to slaughter have been developed on practical lines. The slaughtering establishments, frigorificos, and packing-houses appear to vary considerably in their sanitary equipment and are in some cases open to criticism. Objection has to be taken to the unsatisfactory conditions which result from wooden floors and other undesirable structural arrangements, and to places for the preparation of offensive by-products being often in close proximity to the places of slaughter, dressing, and chilling the meat. Codes of regulations providing for the cleanly handling of the meat are in some cases only partially observed, though in others much care seemed to be taken in this respect. On the other hand the large scale of the operations often enables systems to be followed in the Argentine which are in advance of ordinary practices in this country, and Mr. YOUNG notes that this is specially the case in the matter of washing the carcasses.

After a description of the system of economic disposal of the various parts of the animals, the report describes the system of inspection for disease at some length. The chief impression we gain on this matter is that a genuine and serious attempt is made in the Republic to detect and deal with disease in meat on satisfactory lines, and that pressure from this country for improvements in methods would be welcomed by the Argentine authorities. The inspecting staffs are appointed by the Government, which makes a charge to the owners of the frigorificos. Their code of instructions is, on the whole, a satisfactory one, and Mr. YOUNG'S principal criticism is that the inspectors are not always distributed among the frigorificos to best advantage and sometimes are deficient in number. His estimate that an inspector cannot examine more than 100 beef carcasses a day without getting tired or inattentive does not seem improbable. In matters of organisation the system followed has some instructive features. A convenient arrangement for dealing with tuberculous meat depends upon the insertion into the carcass of skewers indicating by their colour the organs or glands which have been found affected. This is a very ingenious arrangement, and in other ways the presence of originality and direct thinking among those engaged in the meat trade of the Argentine is displayed. It is noteworthy that the proportion of tuberculous cattle in the Republic has been found to be as high as 4 per cent., and much of the doubt entertained by the City authorities as to the sufficiency of inspection in the Argentine has resulted from the discovery of tuberculous lesions when the carcasses have been cut up in the English markets.

Mr. YOUNG makes a practical suggestion, which is endorsed by Dr. HOWARTH, that in view of the enormous development of the Argentine meat trade a permanent British veterinary officer should be attached to the British Legation at Buenos Aires, with the duty of reporting to the Local Government Board (and for the information of the English meat inspecting authorities) on the efficiency of meat inspection, the classes of meat used, and the conditions of canning of food in the frigorificos and factories. Similar officers already act in London on behalf of various foreign governments, and the suggestion has much to commend it. Since the agitation for better and more wholesome conditions of meat preparation which arose with the so-called "Chicago scandals" about eight years ago the meat industry as a whole has realised that its ultimate interests lie in the promotion of hygienic methods, and health authorities have been much more active in securing the observance of such methods. In this country Mr. BURNS'S Food Regulation Act, under which meat inspection is now undertaken at the ports of entry, must be credited with indirectly bringing about great improvements in the conditions of meat inspection and preparation abroad. But there are obvious and sometimes insuperable limitations to the inspection of meat foods when once they have passed the slaughter-house, and this is particularly the case with canned and prepared foods, the export of which from the Argentine may be expected to increase as the meat industry

continues to develop there and competition increases. Here it seems probable that a relatively small amount of official investigation and first-hand information at the place of origin could save much of the time and labour now given by inspecting officers at the home ports and markets, and would also produce more efficient control over this important section of our food-supply.

Annotations.

"Ne quid nimis."

THE PREVENTION OF VENEREAL DISEASES.

WE understand that conferences have recently been held, under the chairmanship of Sir Thomas Barlow, to consider the formation of a National Council for Combating Venereal Diseases. Those present have included Sir Rickman Godlee, Sir Francis Champneys, the Bishop of Southwark, Major Leonard Darwin, Sir William Osler, Sir Clifford Allbutt, Sir Henry Morris, Sir A. Pearce Gould, Sir Wilmot Herringham, and Mr. Charters Symonds. It has been decided to form such a national council, consisting of representatives both of the medical profession and the general public. With this object a circular letter is about to be issued stating the objects of the movement, explaining its organisation, and inviting the recipients to join the council. This movement is in no small degree the outcome of the work and recommendations of the special committee of the Royal Society of Medicine, which has been in existence now for over two years, and which originated in a conference between the Royal Society of Medicine and the Eugenics Education Society.

BASEMENT HOUSES.

SOME useful practical suggestions as to the remodelling of basement houses were made at the congress of the Royal Sanitary Institute which has just been held at Blackpool. Mrs. Cloudesley Brereton, who has given much attention to this subject in consultation with sanitary engineers and architects, laid stress upon the growing inconvenience of basement dwellings in modern conditions of town life, and put forward a series of plans for dealing with basements in houses of different character and rental. It is admitted by all that in much house property, particularly where the dwelling has been sublet into tenements, the basement is often in every respect unsuited for healthy living. This fact has been recognised in recent housing legislation which prevents the use of underground rooms for sleeping where they are insufficient in height or where they do not comply with the regulations of local authorities as to light, ventilation, and other matters. In London the conditions have been very striking, and the Local Government Board has lately issued a model series of regulations for this purpose, and under these regulations and the powers of the Public Health (London) Act much has been done to prevent the occupation of the worst type of basement. The basement houses dealt with by Mrs. Brereton, however, are those of a better class, where, though the complete disuse of the basement can hardly be insisted upon on public health grounds, its presence creates many difficult problems in domestic organisation and accentuates the difficulties of securing domestic service. Public opinion, in fact, has revolted against the basement house, and the inconveniences of basement rooms in London houses are responsible in great measure for migration to the outskirts and for the large number of empty houses so often found in typical London streets of middle-class dwellings. Property owners might often give more consideration to the question of adapting such dwellings to modern requirements, and would in many cases find themselves well repaid for the capital outlay required. Mrs. Brereton's remedies for the most part consist in removing the kitchen to the ground floor, where it would adjoin the dining-room, and adapting the basement rooms as storerooms, workshops, boxrooms, and the like. In some cases, where there is sufficient space or area in front, the underground room can be opened out to serve as a covered playground or even to store a small motor-car, though the original planning of the dwelling rarely can permit this modification. The number of habitable rooms will be reduced, but this is not always a drawback, and the loss of space can be compensated for by domestic labour-saving appliances. Some of these are suggested by Mrs. Cloudesley Brereton in a manner which deserves attention from those owning or living in houses of the kind here in question.

GOLF BALLS: A WARNING.

THE structure of a golf ball does not attract as a rule the interest of the player; his only concern about it is that its composition shall be durable and such as may add possibly to the flight of the tee shot, and that it shall be true on the green. The ball may possess a power for harm of which he is not aware, but which he certainly should be on his guard against in view of a distressing accident which befel a golfer a short while ago. The pathological circumstances of the case are briefly noted in our columns to-day by Mr. Walter H. Jessop, ophthalmic surgeon to St. Bartholomew's Hospital, while the victim of the accident has also told us the story. Some curiosity having been expressed as to the composition of a certain ball in his presence a serious attempt to satisfy this was begun by stripping the ball of its cover and of its tight rubber bandaging beneath. All went well until the inner liquid core was apparently pierced in the endeavour probably to get rapidly at the mystery of the centre. There was suddenly set free a semi-fluid mass which came out with such force as to be projected on the ceiling. Unfortunately some of this mass struck the dissector sharply in the eye, which resulted in a serious injury, the surgeon to whom the patient came at first believing that irreparable mischief had been done, with a prospect possibly of the power of sight being for ever destroyed. We are glad to learn, however, that the outlook is since more favourable, and that eventually the sight and the injured tissue may be restored. The possibility of a golf ball behaving thus may not be generally known, and in ordinary circumstances would never be discovered, but nevertheless some protection is needed, we think, against this concealed danger. In the present instance it was curiosity as to the structure of the ball which led to the accident. The fate of a golf ball no longer good for golf, perhaps because it has lost its true shape or because it has

become freely hacked, is likely enough to be the unwinding of its ingeniously wound rubber binding. The ball is, of course, not sold for this purpose, but there are directions now in which the good resilient qualities of the very superior rubber used in a golf ball can be turned to good account and the discarded ball may be selected as a source of this material. It ought to be known that the attempt to recover rubber in this way may be followed with disaster, and we consider that some warning should be issued with those golf balls which contain an inner liquid core of caustic consistency, subjected to the considerable pressure of its tight elastic envelope. As it is, no such warning is issued, though there may exist in the ball all the potentialities of a bomb if it is not carefully handled. Some experiments which we have made with such a ball show that the pressure exists only so long as the liquid core is held tight in the grip of its tense rubber binding. At this stage, if the liquid core is pricked by a sharp instrument, the contents are ejected with great force. If, however, the elastic binding is gradually released or unwound, the liquid core, we find, is disclosed at its full size, having had its pressure gradually relaxed, and the little bag of fluid is then practically incapable of discharging its contents. The bag of fluid, in our examination of balls of similar make to the one with which the accident occurred, consists of a little rubber bottle or flask containing a semi-fluid mass of soft soap or potash soap. The rubber bottle is closed at its neck by means of tightly bound string. Leakage is possible at this point, so that the contents may be discharged without the intervention of a sharp instrument. The potash soap we examined was very strongly alkaline, and no doubt would act as a corrosive in much the same way as free caustic alkali. Most people are aware of the exquisite pain which even soap made for toilet purposes gives when inadvertently the lather gets into the eye. When this happens with a strong, coarse alkaline potash soap used for common scouring purposes it may easily be imagined how intensified the action can be. But in the instance quoted the potash soap was also a projectile which came into contact with the sensitive tissue of the eye with great force. We think that makers of such balls should issue a caution in regard to the dangers of the liquid core existing under the great pressure of the tight rubber folds. For the sake of children who may get possession of old golf balls, we think that it should be widely known that to experiment with the structure of certain varieties is attended with grave risks.

THE PSYCHOSES OF UNDULANT FEVER.

THE symptomatology of undulant fever or Malta fever, as it will be for some time called, is being continually enriched by new elements which tend to characterise more distinctly its clinical course and at the same time contribute towards differentiating it from other septicæmic conditions. Professor A. Cantani has lately[1] drawn attention more especially to the psychical disturbances which sometimes accompany this disease due to the deleterious action of the bacillus melitensis and its products on the peripheral and central nervous system. Certain minor cerebral disturbances are familiar to those who frequently come across cases of Malta fever, and these are characterised by a special state of disquiet and agitation, a sense of complete disinclination and indifference, or at other times an unreasonable and excessive despair in the face of the reappearance of the febrile symptoms, intractable to all remedies and every change of surroundings. Many observers such as Grocco, Tomaselli, and Timpano have already described cases of nervous disturbances of the heart and respiration, dysphagia, hiccough, and obstinate vomiting, with intense headache, photophobia, and delirium; while the work of De Nunno on an experimental basis clearly demonstrated the possibility on the part of the micrococcus melitensis of causing profound histological changes in the nervous system both central and peripheral. The psychical disturbances, while they are found in some cases vaguely marked as part of the general discomfort, rarely assume so prominent an aspect as may be met with in other febrile infective diseases. As a matter of fact, only one case of severe melancholia has been recorded in association with undulant fever, but Professor Cantani now relates a case of the disease, not severe, but well marked, with enlargement of spleen and liver, with tachycardia, where conspicuous psychic phenomena made their appearance during the later stages of the malady, which had already lasted four months. The patient was subject to maniacal attacks, during which he could not be restrained in bed; he bit the sheets, uttered hoarse cries, had hallucinations of persecution, and no longer recognised his own family. In calm moments, on the other hand, he had a fatuous expression, refused food, continually asserted that he could not move his limbs, and was generally incoherent. Professor Bianchi, of Naples, who saw the case, agreed in the diagnosis that the case was one of psychosis of infective disease (undulant fever). It is difficult to explain the fact why psychic disturbances are rare in this disease and comparatively frequent in other infective maladies. For while infection by Bruce's micro-organism is a form of septicæmia benign in comparison with forms caused by other bacteria, and while it is moreover a mild septicæmia owing to the small numbers of bacilli circulating in the blood, it is, on the other hand, remarkable for its protracted duration. More observations on these lines may further tend to confirm the deleterious action of the bacillus melitensis on the central nervous system.

[1] Gazzetta degli Ospedali, anno xxxv., No. 68, June 7th, 1914, Corso Magenta, Milan.

SIGHT IN THE MERCANTILE MARINE.

THE Board of Trade has issued a report on the new sight tests used in the Mercantile Marine. This report covers the period of April 1st to Dec. 31st, 1913. An improved wool test, in which the candidate has to match five colours, and a lantern test were used. The cases of colour blindness are divided into those definitely rejected by the local examiners and those referred for a special examination, the local examiner being doubtful. Of the 286 definitely rejected in the local examinations, 148 failed in both the lantern and the wool test and 138 failed in the lantern test only; there was no failure with the wool test which passed the lantern test. Of the 286, 93 appealed, 26 being successful. Of 125 referred cases, 20 were referred on both the lantern and wools, 101 on the lantern only, 3 on the wools only, and 1 on form vision as well. Of this number there were 30 failures; 3 of

these were referred on both the lantern and wool test, 26 on the lantern only, and 1 on form vision as well. Those referred on the wool test alone were passed. From this report it is perfectly evident that the Board of Trade will no longer rely on the wool test, and ophthalmologists presumably will be in accord with the Board.

DISEASES ABOARD SHIP IN THE PAST.

AN interesting document recently presented to the Library of the Royal College of Surgeons of England is a certified copy of the "Medical Log" of a crowded slave-ship, the *Lord Stanley*, which was compiled by the ship's surgeon, Christopher Bowes, in 1792. The present donor, Mr. Arthur Bowes Elliott, F.R.C.S., is the author's grandson. It appears that in April, 1792, the ship being then bound for Grenada, a black girl complained of pain in her bowels and diarrhœa, and was treated with "haust. c. rh. & magn. alb." and a solution of vitriol. Her recovery is noted on the 24th of the month, by which date a boy has been attacked. The disease then spreads to the whole body of slaves, and some 16 deaths are noted. The log ends on July 26th, and with the epidemic still in full swing. The extreme symptoms of the disease are weakness, tremors, pains in the chest and limbs, delirium, and diarrhœa. In an interesting MS. note appended to the document Sir Ronald Ross expresses the opinion that this was perhaps not a regular epidemic. "Quite possibly," he says, "many of the slaves had tried to poison themselves on being captured." Perhaps, however, the blacks were suffering from a form of infantile diarrhœa. It is interesting to note that they are well treated and their cases carefully recorded by the ship's surgeon. Good food, for instance, is furnished them in plenty. Slaves were perhaps likely to fare better than sailors on board ship. Indeed, there is much evidence to show that the sailor was throughout the eighteenth and still more in the seventeenth and sixteenth centuries regarded as a very poor sort of chattel and a fit victim of diseases, the names of which have even not been recorded. Hakluyt's voyages furnish us with many details of epidemics on board ship. During Jaques Cartier's expedition to Newfoundland, for instance, which took place in 1535, his crew were decimated with scurvy, and in 1545 the plague ravaged the English fleet in home waters. Queen Elizabeth's captains wrote home constantly, complaining of the miserably insanitary conditions on board their ships, of the prostration and starvation of their seamen, of rats, mutiny, filth, and sepsis. Most of these horrors have been described at length by Dr. Alan Moore in his thesis for the M.B. degree Cantab., entitled, "An Examination of the Chief Causes of Disease at Sea in the Era of the Tudors and Stewarts, and of the Measures taken Against It." He quotes Captain John Smith's "Accidence for Young Seamen," published in 1626, not so long after the time when the sailors in Shakespeare's "Tempest" were calling out "Yare! Yare!" "Many supposeth," says Smith, "anything is good enough to serve men at sea." The commander should hold a contrary opinion. He should bear in mind the constant exposure undergone by his men, who "must stand to their tackelings" in the worst weather. Smith gives a list of provisions which if carried by most ships would have done much to prevent scurvy. "When a man is ill sicke," says he, "or at the poynt of death, I would know whether a dish of buttered rice, with a little cinamon and sugar, a little minced meate, or roast beefe, a few stewed prunes, a race of greene-ginger, a flap Jacke, a can of fresh water brued with a little cinamon, ginger and sugar, be not better than a little poore John, or salt fish, with oyle and mustard, or bisket, butter, cheese, or oatmeale pottage on fish dayes, salte beefe, porke and pease and sixe shillings beere. This is your ordinary ships allowance, and good for them are well ..... which is not alwayes, as seamen can too well witnesse: and after a storme, when poore men are all wet, and some not so much as a cloth to shift him, shaking with cold, few of those but will tell you, a little sacke or aquavitae, is much better to keep them in health" than beer or water. Of the horrors of foreign navies in the past we know little, but from the fact that the "calenture," a "ritual" disease, led sailors under the influence of fever to jump into the sea and began to be observed as though it were a specific malady at the end of the eighteenth and beginning of the nineteenth centuries, we are led to suppose that life aboard foreign ships was miserable enough.

A NEW SURGICAL HÆMOSTATIC.

IN spite of all that has been done, or attempted, in the effort to discover more perfect means of hæmostasis, hæmorrhage is still one of the prime hindrances to surgical advance. In an article in the *Deutsche Medizinische Wochenschrift* for June 25th Dr. E. Vogt describes the experiences of the gynæcological clinic to which he is attached in Dresden, in the uses of a new styptic named "coagulen," which has, we are told, been in use for some time in the surgical service of Professor Kocher, of Berne, who with his assistant, Dr. A. Fonio, was responsible for its discovery. This substance is a light brown, coarsely granular powder, soluble in ether, chloroform, alcohol, normal saline, and water. It is derived from the blood platelets; by what process, Dr. Vogt does not tell us. The form in which it is employed in surgery is that of the solution in normal saline, sterilised by brief boiling immediately before use. As for its value in surgery the Berne experiences to date lead its sponsors to claim that it brings parenchymatous hæmorrhage to an abrupt end; that for hæmorrhage from vessels of small calibre the simultaneous application of coagulen with artery forceps renders the use of ligatures unnecessary; and that even severer bleeding from larger vessels may be checked by pressure with gauze tampons soaked in coagulen solution. These claims have been thoroughly tested in the Dresden clinic during the past year. In operations for prolapse, in the extensive hæmorrhage that follows removal of intraligamentary tumours by shelling out, in the bleeding from the paravesical veins that may complicate the Wertheim operation for uterine cancer, after extirpation of pelvic hæmatocele, and so on, this new method of hæmostasis seems to have given satisfactory results. Another type of operation in which it proved very useful was the plastic procedure of which posterior colporrhaphy may be quoted as an example. Here the use of coagulen is said to have obviated the use of ligatures and continually repeated tamponage, the former of which introduces foreign material and the latter a source of mechanical injury to the tissues, to the detriment of the operative result. In some such operations it was found possible to dispense

altogether with ligatures. Even in the major laparotomies the officers of the Dresden clinic have found coagulen useful; its action in diminishing hæmorrhage they regard as important in its tendency to lessen shock. Among its further advantages are the clearer field of operation which it provides for the surgeon, and the fact that it obviates the necessity of drainage and other inconvenient features of the after-treatment. It has been used in a 10 per cent. solution, higher concentrations having no advantage over this strength. This is sterilised by heat for two or three minutes, immediately before use, and injected into the bleeding area or into the vessel itself, or applied with gauze soaked in the solution. No untoward after-effects are observed, though a number of the laparotomy cases were allowed to get up on the third day after operation. It is now being applied directly to cases of severe menorrhagia and metrorrhagia, and intravenously in placenta prævia and melæna neonatorum. It is clear that if the experiences of other surgeons go to substantiate those described by Vogt, the substance for which we are indebted to Kocher and Fonio will render further progress in the surgical art in various directions. Clinical experiences with hæmostatics are now being supplied to the medical profession with some freedom; we have published in THE LANCET[1] two notes on the subject recently which may well be consulted.

REMOVAL OF FOREIGN BODIES FROM THE PERICARDIAL SAC.

IN the *Annals of Surgery* for June two rather remarkable surgical feats are recorded. The first case was that of a man aged 46, admitted to the Montreal General Hospital under Dr. G. E. Armstrong, who reports the case, suffering from a wound in the chest inflicted by a 32 calibre revolver at a range of 5 feet. In the third left interspace, near the sternal border, there was a small punctured wound. There was little or no subjective discomfort, but in the afternoon of the same day the pulse became irregular. Skiagraphic examination showed that the bullet lay loose in the pericardial sac, turning to the right when the patient lay on his right side, and vice versa. The pulse became more irregular during the next four or five days, and tracings showed that this was a total arrhythmia of the type that is associated with auricular fibrillation. This, together with a slight change for the worse in the man's general condition, determined the surgeon in favour of operation. The patient was anæsthetised with ether administered by the intratracheal method. The pericardial sac was reached and incised through the fourth left space, but as this opening did not give free access to the bullet a part of the fifth rib was removed. By this means the bullet, which lay behind the heart, was brought within reach of the operator's finger and hooked out of the chest. The pericardial sac contained so little blood that the incision was closed without drainage. Within a few hours the rhythm was normal once more, and the patient seems to have done well. The other case is reported by Dr. Robert Proust, who gives a very full account of the steps by which he extracted a pistol bullet from the pericardial sac of a boy of 13. In this case there had been a good deal of hæmorrhage into the sac, and when the bullet was removed it came away embedded in a clot the size of the fist. The bleeding point was found on the front of the heart, near the apex and towards the left border. This was secured and the hæmorrhage checked, but drainage was inevitable. The small rubber drain that was used proved ineffective, and had to be removed on the thirteenth day after operation, this affording the patient much relief, since it allowed the contents of the sac to escape. The patient made a good recovery, and now, four years later, he is able to work. Examination with the X rays and with the electrocardiogram shows little if any trace of the injury, though by the former method it was said there was a relatively translucent area on the front of the heart near the apex which must have corresponded with the site of the scar in the cardiac wall.

[1] THE LANCET, April 4th, 1914, p. 967; and April 11th, p. 1057.

"TENNIS ELBOW."

Dr. W. P. Coues has published recently an important paper on the condition known as "epicondylitis," or "tennis elbow," which was first described by Bähr in 1900, and has been principally studied on the Continent. It is described as not uncommon in those who take much exercise, particularly lawn-tennis players. But Dr. Coues has found that athletics in which strenuous movements of the arm play an important part are not the only cause of the trouble. The history is usually as follows. Immediately after a stroke, occasionally some hours or days afterwards, pain is felt in the elbow, usually the right, near the external condyle. This pain may be so severe and sudden as to disable the arm temporarily. It is usually increased by extension of the forearm, not so much by flexion, and may be intermittent or constant, returning immediately the exercise is resumed. Examination soon after injury usually shows no marked swelling. Movement of the elbow is not, as a rule, limited, but there may be great pain on forced extension in the neighbourhood of the external condyle. Pronation and supination are, as a rule, painless. On pressure, an exquisitely painful spot is found over the external epicondyle. Here much pain is felt on full extension of the forearm and radiates down to the fingers. The pain is increased when the fingers grasp an object. It is also brought on by such movements as reaching a book on a shelf or putting on the coat. Sometimes there is a suggestion of a slight thickening over the external epicondyle. After a period of weeks or months, with or without treatment, the pain gradually disappears and the patient may again take up his favourite sport, with, however, possibility of speedy recurrence of the trouble. As to the nature of the lesion, several views have been brought forward. Tears of the fascia or of some muscle bundle attached to the epicondyle, as well as some nerve implication, have been suspected. Dr. Coues suggests that some of the muscles, exerting a powerful pull, tear off their attachments, perhaps carrying small pieces of bone with them. If the exercise is repeatedly attempted the process may recur in lesser degree, producing some periostitis of the external epicondyle. This may also be kept up by the ordinary movements of the arm. Simple rest of the arm for a short time does not cure the condition. It may become quiescent and the patient think himself cured, but the first stroke of his racket will bring back all his pain and disability. Dr. Coues reports the following cases. After half an hour's hard play at lawn tennis a man felt a sharp pain on the outer side of the elbow and forearm on making back-hand strokes, which require a fixed position of the arm

half way between pronation and supination, and there was almost complete inability to make such strokes. At the same time fore-hand strokes, requiring simple flexion only, were made with little discomfort. On examination an exquisitely painful spot was found on the epicondyle. The disability and tenderness persisted three months after the injury. It was questionable whether there was not slight thickening of the periosteum over the epicondyle. In another case a left-handed athletic man while playing golf noticed pain in the right elbow immediately after a stroke, with a distinct sensation of something tearing in the neighbourhood of the external epicondyle. The injury was not severe enough to stop the patient's play that summer, but an exquisitely painful spot appeared over the external epicondyle, where flexion and extension of the fingers caused pain. Considerable pain and disability remained for six months, at the end of which the arm was not well. In this, as well as in another case, a skiagram showed a small spicule of bone which appeared to have been torn from the external condyle.

MURMEKIASMOSIS AMPHILAPHES.

UNDER the somewhat imposing name of murmekiasmosis amphilaphes Dr. A. J. Chalmers, director of the Wellcome Research Laboratories, Khartoum, and Dr. J. B. Christopherson, director of the Khartoum and Omdurman Civil Hospitals, describe in a recent number of the *Journal of Tropical Medicine* a very interesting case of a peculiar form of cutaneous wart characterised by an extraordinary facility for growth causing it to spread and to occupy practically the whole of the right side of the face and neck, involving the external auditory meatus, destroying the right eye, and invading the mucous membranes of the mouth, gums, tongue, and throat. As the most important clinical feature of this apparently new human disease is the warty growths, the authors propose to give it the name of murmekiasmosis amphilaphes, using the term "murmekiasmos" employed by Galen to denote "the breaking out of warts on the body," together with the Greek adjective for "spreading," and adding to Galen's word the termination "is" in order to bring it into accord with modern nomenclature. The patient was an Arab youth, aged 16, and it appears that the warts commenced to show themselves on his face not long after birth. Microscopically the points of interest in the warty masses in this case were the presence of numerous cryptococci, and the fact that the cutaneous warts were largely composed of an adenoma derived from sebaceous glands. A case in England somewhat resembling this in certain respects was published in 1912 by Dr. Lilley in the *British Journal of Dermatology* under the title of "Notes on a Case of Nævo-carcinoma (Melanotic) of the Scalp of a Boy aged 19," but upon examination the clinical description in this English instance does not agree with that of the Arab youth in the Soudan. It is, however, possible that the two conditions might perhaps be variations of the same disease—i.e., a warty growth associated with a proliferation derived from the sebaceous glands. Dr. Chalmers and Dr. Christopherson have made a considerable investigation of the literature of the subject without meeting with any reference to any species of cryptococcus associated with warts. In their opinion the cryptococcus found in the Soudan case does not correspond with any of the already named forms, so that taking all the facts of the case into consideration they think they are justified in regarding the organism as a new species, and they propose to call it by the Latinised name of Cryptococcus myrmeciæ, Chalmers and Christopherson, 1914. The warty growths do not appear *per se* to endanger life, but they destroy organs such as the eye, and when they enter the pharynx there is risk of the larynx becoming involved. The only effectual treatment seems to be by means of dissecting operations, leaving large superficial areas to be covered by skin flaps or by skin-grafting. In the early stages, if the diagnosis is established, the condition can easily be cured by operation—that is, before it had extended to the eye or the pharynx. Some time ago some of the warty masses were removed from the face of the Arab youth by operation, and there has been no reappearance of the growths upon the cicatrix. Owing, however, to the dangers involved no removal of the warty masses inside the mouth, on the tongue, or in the pharynx has been attempted.

THE BRITISH PHARMACOPŒIA, 1914.

AT its meeting on July 13th the executive committee of the General Medical Council formally adopted as "The British Pharmacopœia, 1914," the completed draft submitted by the Pharmacopœia Committee. It was resolved that copies in advance of publication should be made accessible to the public for inspection at the offices of the Council in London, Edinburgh, and Dublin on Monday, August 10th, at 10 A.M., and thereafter from 10 A.M. to 4 P.M., and that a copy for review should on the same day be placed in the hands of the editor of each of the medical and pharmaceutical journals on the Registrar's list. The official publication of the new British Pharmacopœia will be made by notice in the *London Gazette* on Friday, Oct. 9th, on which day copies will be on sale by the publishers, Messrs. Constable and Co., Limited, 10, Orange-street, Leicester-square, W.C.

DIGITALIS AND THE BLOOD PRESSURE.

THE view that the medicinal administration of digitalis causes an increased blood pressure has been so long maintained that the later clinical observations opposing it have even yet gained little general acceptance. It has been noted by Dr. F. W. Price that medicinal doses fail to affect blood pressure; Mackenzie agrees with this finding, and the observations of both were carefully and systematically controlled. On the other hand, it is certain that in animals under experimental, and naturally artificial, conditions digitalis does raise the blood pressure. But this is, perhaps, an instance where it is not safe to argue clinically from laboratory data. Dr. Charles H. Lawrence[1] has made some further observations respecting the effect of digitalis upon the blood pressure in a series of 26 cases, in all of which some degree of cardiac decompensation was present. Both the systolic and diastolic pressures were recorded, and the quantity of urine noted. Digipuratum was the preparation given. In only 19 per cent. was any rise of pressure detected; the maximum rise was 30 mm. Hg, and in this case there happened to be an added acute renal infection. On the other hand, 66 per cent. showed a fall of blood pressure and

[1] Boston Medical and Surgical Journal. 1914, vol. clxx., p. 37.

15 per cent. showed no change in pressure. The effects of digitalis upon diuresis, too, were not what one has been led to suppose they would be. Diuresis is associated with fall of blood pressure, not the reverse. This is shown by the fact that where a rise of pressure was noted no cases showed diuresis; where the pressure fell, 88 per cent. showed a diuresis. Upon the diastolic pressure digitalis exerts a similar but less marked effect to that upon systolic. The changes are of less amplitude, and consequently there is a lessened pulse pressure (i.e., difference between systolic and diastolic pressures). The practical conclusions of these observations go to suggest that the fear of this drug's bad effects in cases of high tension, angina pectoris, or arterio-sclerosis, owing to its increasing the blood pressure, is unwarranted. Digitalis in such cases may do good since it rarely causes a rise of pressure, and frequently, by its reverse effect, appears to procure a considerable diuresis. Especially when there is some cardiac decompensation is its administration to be recommended.

Dr. Frederick Taylor, consulting physician to Guy's Hospital, has been elected President of the Royal Society of Medicine for the ensuing year.

Sir William Watson Cheyne, Bart., honorary surgeon to the King and surgeon to King's College Hospital, has been elected President of the Royal College of Surgeons of England.

WE sympathise deeply with the officers of the British Medical Association in having been unable to obtain a favourable answer to their request that the action Stevens *v.* The British Medical Association should stand over for retrial till next sittings. As matters are, the case, which was opened on Wednesday, may still be under hearing in London during the annual meeting of the Association at Aberdeen, a circumstance very embarrassing for all the officers of the Association.

LUNCHEON TO SIR ALEXANDER OGSTON.—As already announced in these columns, arrangements have been made to entertain Sir Alexander Ogston, K.C.V.O., to luncheon by his former house surgeons and dressers on Thursday, July 30th, at the Grand Hotel, Aberdeen. The chair will be taken at 1.30 o'clock by Sir James Porter, K.C.B., late Medical Director-General of the Royal Navy. Those desirous of attending should make application before July 23rd to the joint honorary secretary, Dr. James W. Cook, 26, Manchester-road, Bury, Lancashire.

PRIZE DAY AT GUY'S HOSPITAL.—On July 9th Viscount Goschen presided at the distribution of prizes and medals won by the successful students at Guy's Hospital. Dr. H. C. Cameron, Dean of the Hospital, referring to the Medical School Research Fund started many years ago by a gift of £1000 from the late Mr. Pierpont Morgan, said that it had already borne fruit under the chairmanship of Sir Cooper Perry, with the assistance of several of the heads of departments, in the establishment of a small ward for the study of diseases of nutrition in infancy. The increased accommodation at the school had made it possible to devote more attention to post-graduate students, and in the medical school alone there were now 30 workers, not including the hospital staff engaged in research. Sir George Reid, who presented the prizes, expressed his pleasure at the prominence which was given to research work. The medals awarded were as follows: The Newland-Pedley gold medal for practical dentistry, A. E. Lowein; the Golding-Bird gold medal and scholarship in bacteriology, W. A. Young; the Treasurer's gold medal for clinical medicine, C. de Wet Gibb, and for clinical surgery, C. S. L. Roberts.

ENGLISH MEDICINE AND SURGERY IN THE FOURTEENTH CENTURY.[1]

BY D'ARCY POWER, F.R.C.S. ENG.,
SURGEON TO ST. BARTHOLOMEW'S HOSPITAL, AND FORMERLY PRESIDENT OF THE HARVEIAN SOCIETY OF LONDON.

THE Harveian lecture was established in 1875 to promote the diffusion of exact scientific knowledge, and the office has always been held by one who has done pioneer work in the subject upon which he has lectured. I felt it an especial honour, therefore, when your council not only asked me to lecture, but invited me to choose some topic connected with the history of medicine, a branch of knowledge which had not previously been selected by any lecturer. I accepted the invitation with pleasure, and the more so as it obliged me to carry out a piece of work which I had long been wanting to do and might not otherwise have undertaken.

England in the Fourteenth Century.

I chose "English Medicine and Surgery in the Reign of Edward III." This king was born, as you know, in 1312, came to the throne in 1327, and died in 1377. He lived, therefore, practically through the fourteenth century—a century which closed mediæval history in Europe. It was heir to the wonderful advances in scientific knowledge which marked the twelfth and thirteenth centuries; it immediately preceded the equally wonderful revival in art and literature known to us as the Renascence, a revival which took place at the expense of what is now called "research" and "original work" in favour of art and literature. The men of the fourteenth century were in touch with the older beliefs and traditions, whilst they were endowed with the knowledge of science which had been gained by Roger Bacon and Robert Grosteste. The King of England still flew the Wessex dragon, the old Saxon flag of England when he went to battle, and his wounded men were treated as often by spells and wort-cunning as by clean dressings and primary suture of the bowel.

The fourteenth century is thus worthy of careful study, and nothing in it is more worthy than the practice and the practitioners of medicine. The country was at war with France for 100 years, and the upper and lower classes were as familiar with the Netherlands, France, and Spain as our own men are with South Africa. Trade was active and large sums of money were constantly changing hands. The Black Death, too, in the middle of the century was followed by a long train of epidemic illnesses. All classes of the medical profession profited, and all had abundant opportunity of practising their calling, whilst foreign victories by raising the national blood pressure made them sanguine enough to experiment and advance upon the older methods. The younger generation, too, proved receptive. It watched the results of its teachers and was ready to adopt all means which had proved successful. Surgery, perhaps more than medicine, was in a fair way of becoming a science; then suddenly came the Wars of the Roses, chaos, and all was lost for very many years.

John Arderne.

The fourteenth century was an era of really great surgeons throughout Europe. Lanfrank, the most distinguished pupil of William de Salicet,

[1] The Harveian lecture, delivered before the Harveian Society of London.

died in 1306; Henri de Mondeville lived from 1260 until 1320; Gui de Chauliac, prince of the mediæval writers on surgery, died in 1368; Jan Yperman, the Flemish surgeon, died in 1350. These great surgeons were foreigners. We had in England at least one original surgeon—John Arderne—worthy to be classed with them. (Fig. 1.) Born in 1307 he practised for many years at Newark, then a centre for England and a meeting place for Parliament. He came to London in his old age and died at the end of the century. Typical of the fourteenth century he was skilful in leechcraft, a believer in spells, as befitted one brought up in the older school of thought, and yet a skilful and original surgeon, owing no allegiance to authority, profiting by his experience, able to invent wholly new operations. I desire to speak of him for a short time because the kindness of Mr. Henry S. Wellcome and of Mr. C. J. S. Thompson enables me to show you a manuscript of his works which has not hitherto been thoroughly examined.

Manuscript of Works of Arderne.

The original manuscript is in the Royal Library at Stockholm. It is said to have been bought in London in 1759 for the sum of £15 by the Swedish Minister at St. James's, and it was presented by him to the king on his return home.

The manuscript (Fig. 2) is a roll of eight skins of vellum sewn together. It measures 17 ft. 8 in. in length by 15 in. The writing is arranged in two and sometimes in three columns which are separated by coloured figures illustrating the text. It is written in an early fifteenth century hand, and there is no reason to doubt the information added later that it was made in the year 1412. The roll has been exposed to considerable vicissitudes during the 502 years it has been in existence, and parts of it are quite illegible. I am, however, very greatly indebted to Mr. Eric Millar, of the Manuscript Department at the British Museum, for the great pains he has taken in transcribing all that can still be deciphered. It is clear from this transcript that the roll is a Latin version of a part of the works of John Arderne made a few years after his death by a copyist who had some knowledge of the "Lilium Medicinae" written by Bernard Gordon in 1305. It is, in fact, what the publishers would now call a revised edition of the works of the late Master John Arderne with additions. Like so many revised editions it is completely spoilt. It has lost its savour. Many additions have been made which Master Arderne would have resented, whilst much is omitted upon which he justly prided himself. Fortunately so many manuscripts of Arderne's works still remain—I have myself seen about 60—that we need not be troubled because this one has been edited.

Contents of the Manuscript.

I do not propose to weary you with a detailed account of the roll, and I will only give a few short extracts that you may be able to gain some idea of its nature and contents. The work is an abstract of Arderne's "Liber Receptarum" arranged in the same order as the corresponding chapters in Bernard Gordon's "Lilium Medicinae," which at the time was the ordinary manual of surgery throughout Europe; it cannot be called the text-book of surgery because it circulated in manuscript, as printing was not yet known. Arderne's roll deals with diseases of the head, throat, eye, ear, chest, lungs, digestive organs, liver, spleen, kidneys, and male organs of generation. There is a section on gout, details of cases treated by the author, and some midwifery. Like all Arderne's works it is remarkable in containing no account of fractures and dislocations, and its early character is shown by the very slight reference made to astrology. The religious character of the age is well shown in the short prayer to be said before giving any medicine. It runs—I give you merely the translation—"O Lord, who marvellously madest man and more marvellously reformed him, who hast given physic to regulate the health of men's bodies, pour down from heaven thy blessing upon this remedy or electuary or draught, &c., that into whosoever's body it shall enter they may be worthy to receive strength of mind and of body through Christ our Lord. Amen."

A single example will show the use made of charms or spells. It is recommended in epilepsy that the words Jasper, Melchior, and Balthazar be written with blood drawn from the auricular or little finger of the patient. The paper bearing the words should be worn by the patient, who was to say daily for a month three Pater Nosters and three Ave Marias for the souls of the fathers and mothers of these three kings. He was also to drink the juice of peony in beer or wine for a month. There is no doubt that Arderne had to treat the equivalent of panel patients, for he says, in speaking of constipation, "Let the man drink 'de brodio,'" which was the equivalent of beef-tea, "if he be rich, but if he is a pauper he may just drink his own urine."

These, however, are mere sidelights, for the manuscript contains a record of valuable experience. Arderne says that the following are fatal signs in quinsy: "If the patient foams at the mouth, if the corners of the eyes become black or green, if the pulse cannot be felt, if the extremities become cold, and if a cold stinking sweat exudes from the armpits; because in these cases the patient will die on the same day." He adds in another manuscript that he had treated very many cases of sore throat where the patient died suffocated in three or four days, so that he had probably seen some unrecorded epidemic of diphtheria.

Arderne's Skill as a Surgeon.

The following case shows his surgical ability in a case of stone impacted in the urethra. He says:—

> I saw a young man with a stone as big as a bean so lodged in his penis that it could not escape through its eye, neither could it be pushed back, but it remained in the middle of the organ as it is here shown. I cured him easily with an incision, for I put him on his back and tied his member with linen threads on each side of the stone to prevent it shifting, and after making a small cut with a lancet over the stone I squeezed it out. I then sutured the skin with a needle and thread over the hole, and dressed it with white of egg and finely ground flour, and having wrapped up the penis in a piece of old and thin linen I let him go in peace for three days. I cut and removed the thread at the next dressing, and in less than a fortnight I had cured him completely. There is no need for alarm in these cases, even though the urine escapes from the wound for three or four days after such an operation, for the patient will certainly be cured.

In like manner his treatment of a case of serious primary hæmorrhage was equally surgical, and was far in advance of his time, for he used cleanliness and sponge pressure when most of his contemporaries would have employed astringent ointments because ligatures and forceps to stop bleeding had

not been thought of. Speaking of fistula in ano, Arderne says:—

I cured a man from Northampton who had three holes in the left buttock and three in his scrotum, as is here shown. The blood escaped very freely after the rectum was divided, because the fistula had tracked deeply. I put a sponge into cold water and stopped the bleeding with it. I then stuffed a good-sized sponge into the bowel and made him sit on a chair. The bleeding stopped directly, and as soon as the patient had eaten a meal and had been put to bed he slept well all night without any farther hæmorrhage.

Another manuscript gives the name of this patient as John Colyer, mayor of Northampton, and the records of the city show that he was mayor in 1327, and again in 1339–40.

The roll also contains a very interesting section on midwifery which is well worthy of more careful study. It gives a series of "birth figures" like those found in Rösslin's "Byrth of Mankind." Each figure is accompanied by a short description which in many instances takes the form of question and answer, as if it had been designed for the oral instruction of midwives. The usual formula runs:—

Quartus partus est si ambas manus foras ei invenerit. Quid facere debet obstetrix? duobus humeris ejus manus suas ex utraque infigens retrorsum eum revocet, sicut superius dixi, manibus compositum et apprehenso capite paulatim et leviter eum adducat. Si infans caput habet et si duas manus ejicit, oportet obstetricem prius missa manu sua caput ad orificium corrigere et comprehensis manibus infantis conari debet ne caput orificium vulve non obstipet, sed facillime omne corpus infantis exire possit quo priores manus exierant.

(The fourth birth or position is when both hands present. What should the midwife do? Grasping the hands with the arms on either side let her push back the child arranged with its hands as I have said above, and having seized the head, let her draw it down slowly and gently, &c.)

And so I could go on with extracts for a long time, but as it would be at the risk of wearying you I shall pass on to more general matters.

Medical Practitioners in the Fourteenth Century.

The treatment of the sick in England during the fourteenth century was in the hands of the same classes of practitioner as it is at the present time. It was shared by the physician, the surgeon, the family medical attendant, and the quack. The apothecary, then as now, was a tradesman. In country places the ladies did what they could to relieve the illnesses of their poorer neighbours.

The English Mediæval Physician.

The physician was usually, but not necessarily, a churchman. He learnt abstract science in the monastery schools and the scientific side of medicine in a university. He then returned to his monastery, where he either remained as physician or received preferment, becoming attached to the household of some great man. Dr. Norman Moore[2] gives the names of eight physicians practising in or near London during the reign of Henry III. (1216–72). Two were physicians to the Queen—it is not stated whether or not they were in orders; two were canons of St. Paul's. Two were priests resident at St. Alban's, and it is to be noted that one of these priests was the son of "Adam the Physician," who was not therefore a priest. The last of the eight was a doctor of medicine, a doctor of laws, and a doctor of theology, a professor at Paris and Oxford, physician to the King of France and to the Bishop of Lincoln.

We know that no great change had taken place in the status of the English physician in the next hundred years, because John of Gaunt had two physicians in his retinue, John Bray and William Appulton. John Bray was John the Minorite, "Johannes de ordine Minorum, in armis bellicis strenuus, in physicâ peritissimus, domino Johanni duci Lancastriae familiarissimus" ("John of the order of the Minorites, courageous in war, most skilful in physic, most acceptable to My Lord, John Duke of Lancaster"). It was precisely because he was such a friend of the duke that the London mob beheaded him on Tower Hill after the Savoy was burnt in 1381. His colleague was Frère William de Appulton, "physician and surgeon," who received xl marks in time of peace from the honour of Pomfret; in war time other xl marks and ranked as a gentleman, clerk, esquire, or a chamberlain, having four horses and two grooms allotted to him. Bray had received £10 a year, with 3*s.* a day travelling allowance. He ranked as a chamberlain with an allowance of two horses and the wage of one groom.

The physicians attached to John of Gaunt, therefore, held a good position in his household. They were men of affairs and took an active part in counsels of war. It is clear from the description of Frère William that he was prepared to act as a physician or as a surgeon,[3] so that the line of division between the two branches of the profession was not so absolute as is usually described. The popular idea of a physician as he is represented in Fig. 3 was generally accurate. He was a learned man who taught pupils, gave advice, prescribed drugs, and ordered active treatment when he considered it necessary. In this particular case[4] the physician is represented in an ecclesiastical dress with a biretta (Fig. 3). He is watching a patient who has been ordered to take a dose of medicine. The stool with the basin beneath it shows the primitive sanitary arrangements of the time. It was not even a close stool, the first mention of which is in 1410, or more than 50 years after the time we are considering.

My friend Dr. H. P. Cholmeley has recently issued an admirable account of the English mediæval physician in his book on John of Gaddesden, who lived from 1280 to 1361, and as the book is easily accessible I need say no more about him except that on the two occasions when Arderne, his contemporary, refers to him it is in connexion with the diseases of women, so that he was evidently held in estimation as a gynæcologist.

[2] The History of the Study of Medicine in the British Isles, 1908, p. 16.

[3] The indenture appointing him is dated at the Savoy, March 15th, 1373, and runs: Ceste endenture faite parentre nostre seignur Johan Roy &c d'une part et frere William de Appilton physicien et surgien d'autre part tesmoigne que le dit frere William est retenuz et demourrez envers nostre dit seignur pour peas et pour guerre a terme de sa vie en manere qu'ensuit: c'estassavoir le dit nostre seignur ad done et grante a ly par an a terme de sa vie par le bon et agreable service q'il ly ad fait et ferra xl marcs d'esterlinges a avoir et prendre tant en temps de peas come de guerre de les issues de l'onour de Pountfreit, par les maines de le receyvour illoesques qi pour le temps serra, as termes de Pasques et de Saint Michel par oveles porcions. Et si le dit rent soit a derier par un moys apres aucunes des termes avantdits voet et grant nostre dit seigneur que bien lise au dit frere William de destreyndre en la dite seignurie et chescune parcelle d'ycelle et les destresses retenir tanque gree ly ent soit fait. Et outre ci nostre dit seignur ad grante au dit frere William en temps de guerre autres xl marcs par an a terme de sa vie, apprendre par les mains del tresorer de guerre qi pur le temps serra (ainal qu'il soit) tenu des travailler ovesque nostre dit seignur tant en temps de peas come de guerre es quelles parties q'il plerra a nostre dit seignur et de faire ses ditz offices. Et serra le dit frere William a bouche en courte ovesque un gentil homme clerc ou esquier et un chamberleyn, et prendra livre pur iiij. chivaux et gages pur deux garceons pur le temps q'il serra en courte, et a quelle temps q'il serra hors de courte as busoignes de nostre dit seignur par son commandement il avera gages pur chescun jour solonc son estat est condicion par les maines del tresorer del houstel qi pur le temps serra. En tesmoignance, &c. Donnee etc a la Sauvoye le xv. jour de Mars l'an xlvii. [John of Gaunt's Register, Camd. Soc. ed., 1911, Part I., No. 836.]

[4] Le Livre de Santé, par Aldebardus de Sienne, Sloane MS. 2435.

FIG. 1.

FIG. 2.

FIG. 3.

FIG. 4.

FIG. 5.

FIG. 6.

FIG. 7.

The Operating Surgeon.

The operating surgeon—as a class—was in a lower position than the physician, and during the fourteenth century he was in a transition state. He was still itinerant because he went from house to house to do his cure—that is to say, he undertook for a certain fee to operate and attend the patient until he was well. This involved personal service, occasionally for long periods of time, and the fees charged were relatively large because it was impossible to have more than one case in hand at a time. The fee was paid partly in cash, partly in kind, and partly in the form of an annuity which the surgeon received so long as the patient lived. The operating surgeon travelled extensively, lived with the moneyed classes, and if he was a good fellow was received by his patients on a friendly footing. He also gained a large income.

Most of the operating surgeons in this century had seen war service, I imagine, and although there were a few in the provincial towns, the majority congregated in London where they became members of the Guild or Fraternity of Surgeons. Membership of this Guild gave them the right to call themselves "Master" or "Magister" with a special cap and robe, as seen in the picture (FIG. 1), and for a few years they arrogated to themselves the prefix "de," so that John Arderne when he was elected into the Guild became Magister Johannes de Arderne. Many operating surgeons had taken orders and were consequently unmarried, but they do not seem to have held Church preferment, as was the case with physicians. The attitude of mind of the lay surgeons was, however, sincerely religious when they belonged to the better class, and their religion was certainly not a pose. Arderne, writing in 1376, used to say, "I did my cure to him and the Lord being mene (Deo favente) he was helid perfectly," in exactly the same humble-minded spirit as Ambroise Paré—200 years later—said, "I dressed him, God cured him."

The Master Surgeons as a guild exercised control over the practice of surgery in London. Isolated notices of them occur as early as 1312, and the record of 1354 shows definitely the use to which the authorities put their knowledge. It says:—

> Be it remembered that on Monday next after the feast of St. Matthias the Apostle (24th Feb. N.S.) in the 28th year of the reign of King Edward iiird, the Prior of Hogges, Master Paschal, Master Adam de la Poleterie, and Master David de Westmerland, surgeons, were sworn before the Mayor, Aldermen and Sheriffs, to certify them as to a certain enormous and horrible hurt on the right side of the jaw of Thomas de Shene; whether or not such injury was curable at the time when John le Spicer of Cornhulle took the same Thomas under his care to heal the wound aforesaid. Who say upon their oath, that if the aforesaid John le Spicer at the time when he took the said Thomas under his care had been expert in his craft or art or had called in counsel and assistance to his aid, he might have cured the injury aforesaid; and they farther say that, through want of skill on the part of the aforesaid John le Spicer the said injury under his care has become apparently incurable.

I am inclined to think that John le Spicer was an apothecary seeking to practise surgery and that he was a member of the Fraternity of Spicerers.

The duties of the officers of the Guild had become stereotyped into an oath as early as 1369, but I quote the oath of 1390 because it states that women as well as men practised surgery in the City of London. It runs:—

> On Monday, 10th April in the thirteenth year of King Richard the Second Master John Hynstock, Master Geoffrey Grace, Master John Bradmore and Master Henry Suttone, surgeons were admitted in the Court of Guildhall in London before William Venour, Mayor, and the Aldermen. They were sworn as Masters Surgical of the aforesaid city well and truly to serve the people in working their cures, taking of them reasonable recompence, &c. To practise truly their trade and to make faithful oversight of all others both men and women, occupied in cures or using the art of surgery, presenting their lack both in practice and medicine so often as needs be to the aforesaid Mayor and Aldermen. They shall be ready when warned thereto to take charge of the hurt or wounded and to give faithful information to the servants of the City of such hurt or wounded as are in danger of death or not.

The Master Surgeons themselves were held in some estimation and consorted on fairly equal terms with the physicians, but the reputation of operating surgeons as a whole was not good. Their wandering life very often made them literally vagrants, and if a case was not doing well they had an unpleasant habit of slipping away and leaving the patient to Providence. In the popular estimation they were drunken, lascivious, boastful, and quarrelsome thieves. William de Salicet, writing for surgeons at the end of the thirteenth century, says gravely enough that a wise surgeon will refrain from stealing whilst he is actually in attendance upon a patient, and that he should not employ assistants with notoriously bad characters, not because it is morally wrong, but because such actions are likely to prejudice the patient against his surgeon and so spoil an otherwise good operation.

The best of the operating surgeons, however, did good work in the fourteenth century, and they almost succeeded in making surgery a profession. Their skill and boldness may be judged from this extract from the manuscript of an unknown surgeon whose work still lies unprinted at the British Museum.[5] The section treats "of wounds of the gut and liver." It says:—

> Yf a gutte passe out of the wounde and it be not wounded reduce him in again, and yf you may not reduce him procede in this manner. ffirst chaufe ye guttes that ben oute and mollifie hem with a gret sponge (wetted) in water of ye decoccion of camomulle & anys & enoynte hem with hoote olle of camomulle & when they be chaufed with the aforeseid sponge putte hem in agen as well as you may & yff you may not reduce hem by this weye open ze wound a litell more liztly & widely & then reduce hem & sewe ye wounde & yf the gutte that passe out be wounded then that wounde ben dedlye but yet leve not the resonable cure of the wound.
>
> An ye guttes be kutte all otmest so that ther leve nothyng hoole thane natheless the wound is mortal and may not receive no curacion; but yf ze guttes be kutte on lengthe other in partie on breadth but not fully cut in sonder hardily conduce ye parties of ye gutte that is kutte, whether that it be kutte ye lengthe other brede, & sewe hem in ye manner as skynners sewen ther furroures [furs], for in this case it is ye best maner; & anone as it is sewed lay on a poudir that mo cleve together to the guttes & the sewing the weche is made in this manner: Take Mastic, draganth & gum arabick, &c.

In the same manner it is recommended that a ruptured liver should be treated by suture.

The Barbers.

The term "leech" was used familiarly as the term "doctor" is at present, and was applied to all members of the medical profession. The general or family practitioner, at any rate in London, was obliged to be a member of the guild or fraternity of Barbers. He was a Barber and was called a Barber or, at the best, a Barber practising surgery, for there were no Barber Surgeons, since the Barbers

[5] Gallen's Book of Operacions, Sloane MS. 2463, Fol. 116.

and Surgeons did not unite until 1540. Some jealousy existed between the operating surgeon and the barber who practised surgery, for Arderne says, in speaking of the treatment of thrombosed piles by incision: "And be the lech ware that non of tham that standeth ny about perceive when he openeth the lancet for if barbours know this doing they would usurp this cure, appropriating it to themselves unto unworschip and no little harm of the Master (surgeons)." It is clear, too, that the barbers held a somewhat lower position, for it is told of a fishmonger, who spiked his arm on the swingdoor of the Carmelite Church in Whitefriars, that "he was almost dead what with the aching, swelling, burning and improper treatment of a barber that put into the wound irritating tents of linen and had covered them with diachylon. All thes dressings I took away and about evensong replaced them with a simple dressing of oil. And before cockcrow the patient was relieved and in the morning he slept well and I cured him finally and thereby I got much honour."

Here is a case showing the ordinary course of surgical routine and the relationship between women, barbers, and surgeons in the fourteenth century. The priest had a cancer of his breast. John Arderne tells the story in one of his minor works. He says:—

To a preest of Colstone faste by Bynghuame (Colston Bassett in Notts) ther felle a sore in the ryghte pappe withinne the skyne uppone the heed of the pappe as it were a litill knotte & in manner of a pese with ycchynge & so the forseyd knotte bi contynywaunse grew foorth tyll it was of the gretnesse of ane henne egge & that it came to the foorme & lyknesse of a topp. The colour of this sore was lyvyd medlyd with rednesse & waterynesse & hard in felynge & whane ii yere were passyd he was tawghte of a lady to leye ane emplastre therto & to drynke of the drynke of Antioche and whane he perceyved that the forseyde medicines prevayled hyme nowgth he went uneto the towne of Notynghuame to be leten blood & whane the barbour perceyved the forseyd knotte he asked of hyme whether that he wolde be holpen therof & tolde hyme that he hadde a cure therfore & coowde hele hyme therof. The preest seyd he wolde fayne be holpen but nevertheless he seyde to him he wolde aske counsell yf it myghte be done as he seyd unto him. And in the same towne ther was a wyse sirurgyane of the weche the seyd preest hadde wetynge & wente to hyme to aske counsell yf that he were curable or if that he myghte suffre ony kuttynge or corrosyne or ony suche other medicines. And the seyde leche warned him that he schulde in no manere wyse putte no corrosyve ne non other violent medicines ne lete no kuttynges come ther-ny for yf he dyde he promysed that yt wolde brynge hyme to the deeth withouten ony rekevere.

The barbers acted in their public capacity as health officers of the City of London. They had charge of the gates of the City and were formally appointed gatekeepers. They knew who came in and who went out, and their medical knowledge enabled them to segregate the lepers who were so fruitful a source of anxiety to every community throughout the Middle Ages. The barbers also had the superintendence of the Bagnios, which were little else than licensed brothels, and it is for this reason that in 1308 Richard the Barber, on his presentation to the Court of Aldermen as Supervisor of the Barbers, made "oath that every month he would make scrutiny throughout the whole of his trade and if he should find any among them keeping brothels or acting unseemly in any way and to the scandal of the trade he was to distrain upon them."

These duties interfered to a certain extent with the duties required of every citizen—the serving on juries and keeping of watch and ward. Both were irksome, and the early records of the Barbers are full of attempts to gain exemption. The City watch was especially onerous, for in times of unrest, and they were frequent throughout the thirteenth and fourteenth centuries, the streets of London were patrolled at night by a guard which the chroniclers tell us was as many as 10,000 men armed and grouped into bands under the different aldermen. In ordinary times a dozen men from each ward sufficed, but they had to be properly armed and accoutred so that they were a source of continual expense. The barbers obtained exemption both from serving on juries and from watch and ward, and the exemption, as you know, still holds good for us so long as we are in the actual practice of our profession.

The barbers took no responsibility with their patients. Every person under their care who was "in danger of death or maim"—that is to say, who was seriously ill or likely to suffer from permanent disablement—had to be seen by the Master or Wardens of the Barbers' Guild within three days of the first attendance. Any barber who neglected this rule of "the presentation" of patients was fined and might be imprisoned, whereas if he obeyed it he was held blameless—except in very gross cases of malpraxis—whatever happened. The rule worked well, and for 300 or 400 years there is no record of the attending barber being supplanted by the Master and Wardens whom he had called in to assist him. The women members of the Barbers' Guild and Company did not exercise their art and mystery, but were the wives, widows, and daughters of members who kept on the apprentices or received what would now be called a pension.

Subordinate Grades.

In the subordinate ranks of the profession were many different grades. They chiefly flourished in country places and travelled from town to town. The dentist, as is seen in Fig. 4, was known by the belt which he carried to display the number of successful extractions he had performed, but it is evident that his tools were of the rudest, even if allowance be made for inaccurate drawing. The coucher for cataract, the cutter for stone, and the curer of ruptures were well recognised itinerant occupations, whilst cupping, or "garsing" as it was called, was left to a special class, of whom the last survivor disappeared from the Blackfriars-road well within our own recollection. It seems, however, that only the operative part was left to these practitioners, for the surgical manuals of the time deal with the treatment of diseases of the eye, with the signs and symptoms of stone in the bladder and kidneys, as well as with hernia. The method of leeching seems to have been simple if Fig. 5 may be trusted, for the patient is sitting with her feet in the pond until the leeches fasten upon her legs.

Bathing in like manner was reduced to its simplest form, as is here shown. (Fig. 6.)

The Apothecary.

Very little is known of the apothecary in the fourteenth century. He practised a separate trade in London as a member of the Spicers' Guild—for the Guild of Grocers was not yet formed—and in all probability he was an offshoot of the confectioners. The Ward Robe Rolls show him as a court official who in the reign of Edward II., in 1313, received 7½*d.* a day. His name was Odin the Spicer, and when Madame the Queen was ill at Westminster in the November of that year, he

bought things for her. He is called definitely "Odinus Apothecarius Reginæ." In 1345 Coursus de Gangeland, an apothecary of London, was granted 6d. a day by Edward III. for taking care of and attending his majesty during his illness in Scotland, so that by this time he was definitely engaged in medical practice. In 1360 Peter of Montpellier was apothecary to Edward III., and Freind says in his History of Physic (vol. ii., p. 292) that J. Falcand de Luca in 1357 was the first apothecary to sell medicines in England.

The apothecary held a well recognised position as the "physician's cook," and Chaucer says in his prologue, when speaking of a Doctour of Phisike:—

> Ful redy hadde he his apothecaries,
> To send him drugges, and his letuaries,
> For ech of hem made other for to winne;
> Her frendship was not newe to begynne.

John Arderne makes several references to "the potecary." Writing in 1372–6 he says: "Euforbium is a gumme that potecaryes sellen," and in another place: "Agryppa is ane oyntment that potecaryes sellen, and it is whyte of coloure"; and yet again: "Thou mayest put to a wounde common unguentum album that apothecaries make."

The spicers and the pepperers were nearly all Italians in the fourteenth century, and the apothecary was necessarily a member of one of these guilds, or he could not ply his trade. There is a curious passage in one of Arderne's works which shows that these Italians were already assuming to themselves certain humble medical duties, for he says in speaking of clysters and their uses, "I have gotten an hundred times gret honour with lucre in diverse places. ffor why, at London when Lumbardez oft-times ministered clisteries on their manner to colic men and other men constipate, ne might not availe, I forsooth, with the aforesaid manner of clystering at the first time within the space of a forlong or two I delivered the patient for certayne, our Lord being mene." The passage is interesting apart from the reference to the Lombards as specialists in the administration of enemata, because it shows how prevalent constipation must have been when living was high, people were sedentary, and purgatives were few. The estimation of the action of clysters in terms of distance rather than of time seems to be wholly original. So far as I remember, however, the apothecaries never came into serious conflict with the surgeons or with the barbers of London in the exercise of their occupation. They were soon merged into the great Company of Grocers and developed into ordinary shopkeepers as retail sellers of drugs and spices. It was only when they were formed into a separate body as the Society of Apothecaries that they became a thorn in the side of the physicians, but this was more than 250 years later.

The Hospitals.

The hospitals in the fourteenth century formed a special branch of charitable work, just as they do at the present time. In London they had already existed for nearly 200 years. They were religious institutions nursed by members of the Augustinian order, and provided food, rest, nursing, and religious consolation for those who were acutely ill. There was no separate medical or surgical staff until the sixteenth century, and we have no knowledge as to the nature of the treatment followed. The patients were sick persons found in the streets of the City and all the wounded or injured who chose to apply for relief. Everyone was received freely and without question. Special servants of the hospital—the beadles—clothed in a distinctive livery and wearing a badge, were appointed to bring patients into the hospital. At St. Bartholomew's Hospital they still exist, and their sixteenth century charge ran:—

> Ye shall separate and divide yourselves into sundry parts of the city and the liberties thereof, every man taking his several walk. And if in any of your walks ye shall happen to espy any person infected with any lothely grief or disease, which shall fortune to lie in any notable place in the City to the noyance and infection of the passers by and slander of this house ye shall then give knowledge thereof unto the Almoners of this hospital that they may take such order as to them shall be thought meet.

We also know how such patients were received, for the order runs:—

> When the patient arrives he shall be received thus: First, having confessed his sins to the priest he shall be communicated religiously and afterwards be carried to bed and treated there as Our Lord, according to the resources of the house; each day before the repast of the brethren he shall be given food with charity, and each Sunday the epistle and the gospel shall be read with aspersion.

The patient was looked upon as the direct repreesntative of Christ, and was spoken of as Master or Lord, "Domini nostri pauperes," "Les Signors malades," "Our Lords the Sick," a very different form of address from the brutal terms of the eighteenth century, when they were spoken of officially as "the miserable objects."

The hospital consisted of a large hall (Fig. 7) ornamented with a high-pitched roof, a central louvre, beds in rows down the sides and in the centre, rather overcrowded to our ideas, with an altar raised a few steps at one end so that the patients could see the celebrant. The beds clean and neat, for there is a special order that they should be of sufficient breadth and length, and that the coverlets and sheets should be clean, separated perhaps by curtains, occupied certainly by two patients. This, however, was no hardship, because the proverb that "Travel makes us acquainted with strange bedfellows" is a remembrance of the time when it was usual for a person to share his bed with a stranger, and readers of literature even as late as the eighteenth century will recall many instances where the hero or the heroine has suffered loss at the inn where they have slept with a stranger who rose early and took the purse or the clothes of the heavier sleeper. Indeed, Sir Sidney Waterlow used to tell us when we were house surgeons and complained of the inadequacy of the accommodation offered us by the hospital, that when he was an apprentice he shared his bed with two others and that he slept in the middle because he was the smallest. The use of wooden bedsteads which was universal at the time made the bugcatcher an important and useful person at every hospital. The services of the Church compelled the constant attendance of the religious by night as well as by day, and the sick were therefore never left without supervision.

The food was as good as could be obtained and seems to have been liberally supplied, whilst extras were allowed on a somewhat lavish scale. Of the food and the extras these two stories have come down to us. The first was a miracle wrought by Alfun, the builder of St. Giles, Cripplegate, whom Rahere, the founder of St. Bartholomew's Hospital, had associated with himself when he felt age creeping on.

> It was the manner and custom of this Alfun [says the narrator] with servants of the church to compass and go

about the nigh places of the church busily to seek and provide necessaries to the need of poor men that lay in the hospital and what was committed to him truly to bring home and to sundry men as it was need to divide. And there was a certain butcher Goderyke by name, a man of great sharpness and he was a mean man, the which not only to the asker would not give but was wont with scorning words to insult them. It fell upon a certain day that Alfun went about the butchers man by man and after other when he came to this Goderyke and moved him after the apostle with good and honest words importunately, because he was not willing to give, and when the old man beheld that not for dread, neither for love of God nor also for shame he might not temper the hardness of that indurate heart he broke out in these words, "O thou ungentle and unkind man! I beseech thee wretch put away a little and swage the hardness of that unfaithful soul and take in experience the vertue of the glorious apostle, in whom if thou trust I promise thee that every piece of thy meat that thou givest me a portion of shall the sooner be sold to other and nothing to the minishing or lessening of the price." He, not moved with the instinct or inward stirring of charity but overcome with the importunity of the asker, drew out a piece of the vilest and cast it into his vessell calling them truants and bade them lightly go from him; to whom Alfun answered "I shall not go from thee, till my word and promise be fulfilled." And without tarrying there was a citizen coveting to buy flesh for him and his household and of that heap of the which Alfun spoke before he bought at the will of the seller and bare it with him. And when this was divulged through all the butchery it was taken for a worthy miracle. And from that time they began to be more prompt to give their alms and also fervent in devotion.

The story is a pretty one, and is so graphically told that one has no doubt of its truth. The old priest, with the hospital servants behind him carrying a large wooden begging bowl, going from stall to stall in the meat market; the surly butcher, with the rest of the market looking on to see how Alfun would fare, the twinkle in the old man's eye as he knew that he had bested him; and the breathless citizen, who wanted to buy the worst meat at the highest price, bring back the whole scene and makes one wonder whether a part of it had not been rehearsed by Rahere and Alfun, who must have retained some sparks of that spirit which in youth had made them court favourites.

The story about the "extras" is told of the Knights Hospitalers of St. John of Jerusalem. It is said that Saladin desiring to prove for himself the indulgence of the knights to their patients disguised himself as a pilgrim and was received among the sick at the hospital in Jerusalem. He refused all food, declaring there was only one thing he fancied, and that he knew they would not give him. On being pressed, he confessed that it was one of the feet of the Grand Master's horse. The Grand Master was told, and at once ordered the noble animal to be killed and the sick stranger's desire satisfied. But Saladin thinking the experiment had gone far enough declared himself taken with a repugnance to meat, and the animal was spared.

Conclusion.

And thus ends a very short account of an interesting period of medicine in England. It is impossible in the scope of a single lecture to give more than a bare outline of the subject, but it has been my intention to show that there was a blending of the old and new during the fourteenth century. Wort-cunning, which still lingers amongst us at the herbalists, was the older Saxon leechcraft; spells were a reminiscence of the Danish rule; classical medicine was coming into vogue through the Arabic translations, and was brought to England from the schools of Salernum and Montpellier. Side by side with this knowledge, altering, modifying, and even creating, was the sturdy originality of the English mind. I shall have effected a part of my purpose this evening if this lecture induces some of you to go to the British Museum, to the university libraries, and to the cathedral libraries in search of the writings of our early predecessors which have escaped destruction but have never yet been printed. Such writings I believe to be numerous—some in Latin, some in racy translations, some in the original English in which they were written.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

A QUARTERLY meeting of the Council was held on June 9th, Sir RICKMAN GODLEE, the PRESIDENT, being in the chair.

The PRESIDENT reported the result of the recent election of five members of Council, which was published last week in THE LANCET, and he further stated that Mr. Stanley Boyd being fourth on the poll became substitute member of Council for Mr. R. Clement Lucas until 1917, and that Mr. Charles Ryall being fifth on the poll became substitute member of Council for Mr. Jonathan Hutchinson until 1915.

Mr. Ballance, Mr. Boyd, Mr. Thorburn, Mr. Eccles, and Mr. Ryall were introduced, made declarations in the terms of the oath prescribed by the Charter of 1800, and took their seats in the Council.

It was resolved—

That the Council desire to express to Mr. William Pearson, upon his retirement from the post of prosector, their high appreciation of his services to the College during a period of 58 years. The Council believe that the many preparations added to the Museum as the result of his work are justly counted amongst the most treasured possessions of the College and that they will stand as a lasting record of his exceptional skill and industry.

The PRESIDENT reported that the following demonstrations would be given at the College in connexion with the Fifth Annual Session of the Clinical Congress of Surgeons of North America:—July 27th, 11.30 A.M., Professor A. Keith: The Nature of Peritoneal Adhesions; 28th, 11.30 A.M., Mr. Shattock: Specimens illustrating the Growth of Tumours; 29th, 11.30 A.M., Sir Rickman Godlee: Hunterian and Listerian specimens; 30th, 11.30 A.M., Professor Keith: Hunter's specimens illustrating Growth of Bone; 31st, 11.30 A.M., Mr. Colyer: Specimens from the Odontological Collection illustrating General Surgery; and at 5 P.M., Mr. A. H. Cheatle: The Surgical Anatomy of the Temporal Bone.

The PRESIDENT also stated that a reception would be held in the College from 4 to 6 in the afternoon of Wednesday, July 29th.

Election of President.

Sir William Watson Cheyne was elected President and Sir Frederic Eve and Sir Anthony Bowlby were elected Vice-Presidents.

The following appointments were made:—Erasmus Wilson Lecturer: Mr. S. G. Shattock. Arnott Demonstrator: Professor Keith. Hunterian Professors: Arthur Keith (six lectures), Rupert Farrant (two lectures), William Sampson Handley (one lecture), John Howell Evans (one lecture), Frederick Charles Pybus (one lecture), and Harry Blakeway (one lecture). Arris and Gale Lecturers: Frederick Wood Jones (one lecture) and David Waterston (two lectures). Mr. J. F. Colyer was elected to give two odontological demonstrations.

Sir Rickman Godlee was elected a member of the Executive Committee of the Imperial Cancer Research Fund.

DONATIONS AND BEQUESTS.—The Royal Dental Hospital of London has received a grant of £1000 from the executors of the late Sir William Dunn, being part of the residue of his estate.—Mr. William Hartmann has sent a donation of £1000 to the trustees of the Lord Mayor Treloar Cripples' Hospital and College for a "Meta Hartmann Cot" in the hospital at Alton.

ROYAL COMMISSION ON VENEREAL DISEASES.

AT the forty-fourth meeting of the Royal Commission evidence was given by Mr. J. E. R. Macdonagh, one of the surgeons of the Lock Hospital and by Mr. C. A. Parker, representing the State Medical Service Association.

Mr. Macdonagh said that at the present time the education of medical students in regard to venereal disease was quite inadequate, and it was very important in his opinion that compulsory clinical education of students in venereal disease should be adopted. He considered that widespread clinical experience would render public laboratories for the carrying out of bacteriological and other methods of diagnosing syphilis superfluous. The important thing in dealing with syphilis was to treat cases at the earliest possible moment, and these early cases could be diagnosed with greater certainty by clinical than by pathological methods. A negative Wassermann reaction in early syphilis did not exclude the disease, and if treatment were deferred until the reaction became positive the golden opportunity of cure was lost, however energetic the treatment might be. Syphilitic sores, moreover, frequently existed in which spirochætæ could not be found. Mr. Macdonagh was of opinion that syphilitic nervous lesions were steadily on the increase, and he considered that the spasmodic administration of salvarsan commonly practised in this country was likely to lead to a further increase. This spasmodic administration of the drug, moreover, gave a false sense of security and therefore rendered patients a greater danger to the community. He advocated that the Lock Hospital should be enlarged. The number of patients attending the hospital was steadily increasing. Mr. Macdonagh thought that medical research had been very insufficiently supported by the Government, and that much more might be done in this direction; he suggested that it might be an advantage if payment were only made for results.

Mr. Parker maintained that by the establishment of a State Medical Service many difficulties now connected with the treatment of venereal diseases could be overcome. It was essential that treatment should be efficient and confidential and in the last resort compulsory, and that the medical officers of health should be in touch with all cases of venereal disease. Efficient treatment would be procurable for the whole State service and would be open to all sufferers. The treatment would be confidential; there would be no special service of medical practitioners set aside for dealing exclusively with venereal diseases, by consulting whom patients would at once declare to the world at large the nature of their complaint. The size of the State Medical Service, its large and manifold functions, and its large and specialised staffs would render it impossible for the public to suspect the reasons which led the patient to ask advice. The treatment of venereal disease would be but a part of the preventive and curative treatment offered to all sufferers alike under a State Medical Service. No action whatever would be taken on the part of any public authority as long as a patient attended regularly and carried out the instructions of his doctor, but in the event of his failing to do so he would be proceeded against as a public danger in the same way as is done in the case of ordinary infectious diseases. Mr. Parker considered the difficult question of notification would be solved under a State Medical Service. Notification in the sense of a notice sent by a private practitioner to the medical officer of health would become unnecessary for all patients attending a State doctor would be registered with the history and nature of their complaint, and to those persons the medical officer of health, who would represent but another part of the same service, would have daily access. In the event of their being a body of private practitioners outside the service there should be notification of venereal disease either by name or number, and the medical officer of health would satisfy himself that the necessary treatment was being carried out by the patient. If this were not so the name of the patient would be declared, and he would be transferred to the charge of the State Medical Service. In order to obtain reliable statistics as to the fatal results of venereal diseases and their sequelæ it might be advisable to have a dual system of death certification—one for the purposes of the State Medical Department giving the fullest details as to the primary and secondary causes of death, and the other avoiding all facts which might cast a slur on the memory of the dead to be handed to the relatives of the deceased.

At the forty-fifth meeting the headmasters of Eton and Rugby appeared before the Commission. They considered that the ideal was that boys should be instructed in matters relating to sex by their parents, but their experience showed that that method was not likely at the present moment to be successful to the extent that it was desirable. Instruction at school should be given with much caution, and it should be the special responsibility of the headmaster to give it or to see that it was given. A propaganda based solely on hygienic principles would not bring in the chivalrous appeal which was necessary and was not likely to succeed. At the same time hard exercise, hard work, wholesome society, and moderation in diet and drinking were of great use as safeguards against indulgence.

At the same meeting Dr. Santoliquido, formerly Director-General of the Public Health Department in Italy, gave an account of the administrative methods adopted with regard to venereal diseases in that country.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN the 97 English and Welsh towns with populations exceeding 50,000 at the last Census and whose aggregate population at the middle of this year is estimated at 18,120,059 persons, 9091 births and 4000 deaths were registered during the week ended Saturday, July 11th. The annual rate of mortality in these towns, which had been 12·9, 12·1, and 12·7 per 1000 in the three preceding weeks, fell again to 11·5 per 1000 in the week under notice. During the 13 weeks of last quarter the mean annual death-rate in these towns averaged 13·8, against 13·1 per 1000 in London during the same period. Among the several towns the death-rate last week ranged from 2·8 in Eastbourne, 4·3 in Exeter, 4·7 in Hornsey, 6·0 in Enfield, 6·1 in Wimbledon, and 6·2 in Southend-on-Sea, to 16·7 in Warrington, 17·0 in Gateshead and in Tynemouth, 17·6 in Liverpool, and 22·8 in Bootle.

The 4000 deaths from all causes were 421 fewer than the number in the previous week, and included 394 which were referred to the principal epidemic diseases, against 394 and 444 in the two previous weeks. Of these 394 deaths, 139 resulted from measles, 112 from infantile diarrhœal diseases, 77 from whooping-cough, 30 from diphtheria, 22 from scarlet fever, 13 from enteric fever, and 1 from small-pox. The mean annual death-rate from these diseases was equal to 1·1 per 1000, and was 0·2 less than the rate in the previous week. The deaths attributed to measles, which had been 140, 144, and 130 in the three preceding weeks, rose to 139 last week, and caused the highest annual death-rates of 1·4 per 1000 in Sheffield, 1·7 in Rochdale, 1·8 in Liverpool, and 2·1 in Oldham. The fatal cases of whooping-cough, which had been 99, 93, and 95 in the three preceding weeks, fell to 77 last week; the highest death-rates from this disease last week were 1·5 in Birkenhead and 2·1 in Warrington. The deaths from diphtheria, which had been 40, 35, and 64 in the three preceding weeks, fell to 30 last week; the highest death-rate was 2·7 in Great Yarmouth. The fatal cases of diarrhœa and enteritis (among infants under 2 years), which had been 79, 79, and 116 in the three preceding weeks, were 112 last week; and included 21 in London, 10 in Sheffield, 9 in Liverpool, 8 in Birmingham, and 4 each in Birkenhead and Wigan. The deaths from scarlet fever, which had been 24, 30, and 23 in the three preceding weeks, were 22 last week; of these 22 deaths 5 occurred in London. The deaths from enteric fever, which had been 8, 13, and 16 in the three preceding weeks, fell to 13 last week, and included 4 in London and 3 in Portsmouth. The fatal case of small-pox was recorded in Rochdale.

The number of scarlet fever patients under treatment in the London Fever and the Metropolitan Asylums Hospitals, which had steadily increased from 2862 to 3092 in the eight preceding weeks, further rose to 3109 on Saturday last; 414 new cases were admitted during the week, against 405, 440, and 442 in the three preceding weeks. These hospitals also contained on Saturday last 1085 cases of diphtheria, 256 of whooping-cough, 42 of measles, and 38 of enteric fever, but not one of small-pox. The 921 deaths from all causes in London were 227 fewer than the previous number, and corresponded to an annual death-rate of 10·6 per 1000. The deaths referred to diseases of the respiratory system, which had been 163, 144, and 126 in the three preceding weeks, fell to 111 in the

week under notice, and were 5 above the number in the corresponding week of last year.

Of the 4000 deaths from all causes in the 97 towns, 193 resulted from different forms of violence and 348 were the subject of coroners' inquests. The causes of 29, or 0·7 per cent., of the total deaths were not certified either by a registered medical practitioner or by a coroner after inquest. All the causes of death were duly certified in London, West Ham, Portsmouth, Bristol, Leicester, Nottingham, Manchester, Salford, Bradford, Leeds, Sheffield, and in 71 other smaller towns. Of the 29 uncertified causes of death, 8 were registered in Birmingham, 4 in Liverpool, and 3 in Stoke-on-Trent.

HEALTH OF SCOTCH TOWNS.

In the 16 largest Scotch towns with an aggregate population estimated at 2,293,200 persons at the middle of this year, 1158 births and 597 deaths were registered during the week ended Saturday, July 11th. The annual rate of mortality in these towns, which had been 14·6, 13·8, and 14·1 per 1000 in the three preceding weeks, fell to 13·6 per 1000 in the week under notice. During the 13 weeks of last quarter the mean annual death-rate in these towns averaged 15·5, against a corresponding rate of 13·8 per 1000 in the 97 large English towns. Among the several towns the death-rate last week ranged from 7·0 in Clydebank, 7·3 in Paisley and Kilmarnock, and 7·8 in Falkirk, to 14·1 in Glasgow, 15·7 in Edinburgh, 16·9 in Dundee, and 22·0 in Ayr.

The 597 deaths from all causes were 24 fewer than the number in the previous week, and included 41 which were referred to the principal epidemic diseases, against 52 and 41 in the two preceding weeks. Of these 41 deaths, 13 resulted from whooping-cough, 10 from measles, 10 from infantile diarrhœal diseases, 3 from scarlet fever, 3 from enteric fever, and 2 from diphtheria. The mean annual death-rate from these diseases was equal to 0·9 per 1000, and was 0·2 below the rate recorded in the 97 large English towns. The deaths attributed to whooping-cough, which had been 20, 18, and 12 in the three preceding weeks, were 13 last week, and included 9 in Glasgow and 2 in Coatbridge. The fatal cases from measles, which had been 17, 7, and 9 in the three preceding weeks, rose to 10 last week; of these 10 deaths 6 were registered in Glasgow. The deaths from infantile diarrhœal diseases, which had been 21, 10, and 13 in the three preceding weeks, fell to 10 last week and included 6 in Glasgow and 2 in Aberdeen. The 3 deaths from scarlet fever were slightly below the average in recent weeks, and included 2 which were registered in Glasgow. The 3 deaths from enteric fever exceeded the average in recent weeks, and included 2 in Glasgow. The 2 deaths from diphtheria, which also occurred in Glasgow, showed a marked fall from the numbers in recent weeks.

The deaths referred to diseases of the respiratory system, which had been 77, 64, and 63 in the three preceding weeks, further fell to 61 last week; 26 deaths were referred to different forms of violence, against 26 and 33 in the two preceding weeks.

HEALTH OF IRISH TOWNS.

In the 27 town districts of Ireland, with an aggregate population estimated at 1,206,280 persons at the middle of this year, 671 births and 368 deaths were registered during the week ended Saturday, July 11th. The annual rate of mortality in these towns, which had been 17·7, 15·7, and 16·2 per 1000 in the three preceding weeks, fell to 15·9 per 1000 in the week under notice. During the 13 weeks of last quarter the mean annual death-rate in these towns averaged 19·0 per 1000; in the 97 large English towns the corresponding rate did not exceed 13·8, while in the 16 Scottish towns it was 15·5 per 1000. The annual death-rate in the week under notice was equal to 15·0 in Dublin (against 10·6 in London and 14·1 in Glasgow), 17·0 in Belfast, 15·6 in Cork, 26·6 in Londonderry, 12·2 in Limerick, and 17·1 in Waterford, while in the 21 smaller towns the mean rate was 14·2 per 1000.

The 368 deaths from all causes were 7 below the number in the previous week, and included 38 which were referred to the principal epidemic diseases, against 36 and 47 in the two preceding weeks. Of these 38 deaths, 13 resulted from infantile diarrhœal diseases, 10 from measles, 6 from scarlet fever, 5 from whooping-cough, 3 from enteric fever, and 1 from diphtheria, but not one from small-pox. The mean annual death-rate from these diseases was equal to 1·6 per 1000, against 1·1 and 0·9 per 1000 in the English and Scotch towns respectively. The deaths attributed to infantile diarrhœal diseases, which had been 15, 11, and 14 in the three preceding weeks, were 13 last week, and included 5 in Belfast, 4 in Dublin, and 2 in Londonderry. The fatal cases of measles, which had been 19, 13, and 15 in the three preceding weeks, fell to 10 last week; of these 10 deaths, 6 were registered in Belfast and 4 in Dublin. The deaths from scarlet fever, which had been 8, 2, and 3 in the three preceding weeks, rose to 6 last week, and included 5 in Belfast. The deaths from whooping-cough, which had been 3, 6, and 10 in the three preceding weeks, fell to 5 last week, and included 2 in Belfast and 2 in Dublin. The deaths from enteric fever, which had been 3, 2, and 1 in the three preceding weeks, rose to 3 last week, and included 2 in Dublin. The one death from diphtheria occurred in Belfast, and was considerably below the average in recent weeks.

The deaths referred to diseases of the respiratory system, which had been 68, 57, and 41 in the three preceding weeks, were 53 in the week under notice. Of the 368 deaths from all causes, 109, or 30 per cent., occurred in public institutions and 7 resulted from various forms of violence. The causes of 9, or 2·4 per cent., of the total deaths were not certified either by a registered medical practitioner or by a coroner after inquest; in the 97 large English towns the proportion of uncertified deaths did not exceed 0·7 per cent.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

Staff-Surgeon Frederick Francis Mahon has been promoted to the rank of Fleet-Surgeon in His Majesty's Fleet (dated July 11th, 1914).

The following appointment has been announced: Staff-Surgeon A. T. Gailleton to the *Falmouth*, on recommissioning.

ARMY MEDICAL SERVICE.

Surgeon-General William W. Kenny is placed on retired pay (dated July 14th, 1914). Colonel Tom P. Woodhouse to be Surgeon-General, vice W. W. Kenny, retired (dated July 14th, 1914). Lieutenant-Colonel Frederick W. C. Jones, from the Royal Army Medical Corps, to be Colonel, vice T. P. Woodhouse, promoted (dated July 14th, 1914). Colonel (temporary Surgeon-General) William G. Macpherson, C.M.G., Honorary Physician to the King, to be Surgeon-General to complete establishment (dated July 14th, 1914). Lieutenant-Colonel Thomas W. Gibbard, Royal Army Medical Corps, is appointed an Honorary Surgeon to the King, and granted the brevet rank of Colonel, vice Surgeon-General W. W. Kenny, M.B. (dated July 14th, 1914).

ROYAL ARMY MEDICAL CORPS.

Major Lionel A. Mitchell to be Lieutenant-Colonel (dated July 14th, 1914). Captain Francis Romney Coppinger, from the Indian Medical Service, to be Captain, vice J. B. Hanafin, who exchanges (dated July 15th, 1914).

Surgeon-General R. W. Ford, D.S.O., has taken up duty at Headquarters of the Northern Command at York as Deputy Director of Medical Services.

Colonel R. Kirkpatrick, C.M.G., Assistant Director of Medical Services to the Presidency and Assam Brigades, has been transferred from Calcutta to Darjeeling Cantonment. Colonel T. P. Woodhouse has taken up duty as Deputy Director of Medical Services to the Aldershot Command.

Lieutenant-Colonel F. Caton Jones has arrived home for duty from Meerut Cantonment. Lieutenant-Colonel C. H. Hale, D.S.O., has been transferred from Maymyo, Burma, to hold charge of the Military Hospital at Sialkot Cantonment. Lieutenant-Colonel F. W. Hardy has arrived home from India on leave of absence. Lieutenant-Colonel R. H. Hall has been transferred from the Military Hospital at Cosham to Tidworth Park Camp. Lieutenant-Colonel H. I. Pocock has been transferred from Campbellpore to the Military Hospital at Sialkot. Lieutenant-Colonel A. Kennedy has been placed under orders for service abroad. Lieutenant-Colonel J. J. Gerrard has been appointed Senior Medical Officer to the Sierra Leone Protectorate. Lieutenant-Colonel R. Holyoake has been appointed to hold charge of the Military Hospital at Kamptee Cantonment.

Major A. G. Thompson has arrived home for duty from India. Major R. W. Longhurst has been transferred from Ambala to Subathu Cantonment. Major W. Tibbits has been appointed to Mooltan. Major W. M. H. Spiller has been appointed to hold charge of the Military Hospital at Calcutta. Major J. Matthews has been transferred from Secunderabad to the Military Hospital at York. Major S. W. Sweetnam has arrived home for duty from Ambala. Major C. W. Mainprise has been transferred from Rawal Pindi to Kuldana Cantonment. Major E. E. Parkes has been transferred from Plymouth to the Military Hospital at Jubbulpore Cantonment. Major H. M. Nicholls has joined the Scottish Command. Major L. Cotterill has been transferred from Nowshera to Cherat Cantonment. Major J. G. McNaught, Major J. P. Silver, and Major C. W. Profeit have been placed under orders for service abroad. Major G. J. A. Ormsby has taken up duty in the Irish Command. Major J. F. Martin has been transferred from Sandhurst to the Aldershot Command. Major A. E. Hamerton, D.S.O.,

has been appointed to the Colchester District. Major R. H. Lloyd has taken up duty at the Military Hospital, Dagshai. An exchange on the roster for service abroad has been approved between Major R. W. Clements and Major S. H. Fairrie; the former officer will now proceed abroad during the coming trooping season instead of the latter. Major R. C. Lewis has arrived home on leave of absence from Gibraltar. Major J. C. B. Statham has embarked for a tour of service in the Sierra Leone Protectorate. Major H. Simson has been granted general leave of absence home from India for four and a half months.

Captain C. J. Wyatt has arrived home for duty from the Sierra Leone Protectorate. Captain G. A. D. Harvey has been appointed to the Egyptian Army. Captain D. P. Watson has been appointed to the Irish Command. Captain R. F. O'T. Dickinson has been transferred to the Home Establishment from India. Captain G. Petit has taken up duty in the Eighth (Lucknow) Division on transfer from the Third (Lahore) Division. Captain R. Storrs has joined at Winchester. Captain F. T. Turner has been appointed to the Southern Command. Captain F. A. H. Clarke has been transferred from the Military Hospital at Calcutta to Lebong Cantonment. Captain J. B. Hanafin has arrived home on leave of absence from Ambala Cantonment. Captain J. Fairbairn has been appointed to the Scottish Command. Captain D. Ahern has been transferred from Dublin to the Military Hospital at the Curragh Camp. Captain J. J. H. Beckton has been appointed to the Military Hospital at Rawal Pindi. Captain W. K. Beaman has taken up duty in the Northern Command. Captain E. B. Booth has joined at Tower Hill, West Africa. An exchange on the roster for service abroad has been approved between Captain H. E. Priestley and Captain H. B. Kelly; the former officer will now proceed abroad during the coming trooping season instead of the latter. Captain C. T. V. Benson has been appointed Staff-Surgeon at Fort St. George, Madras. Captain C. W. Bowle has been appointed to hold charge of the Military Hospital at Enniskillen. Captain F. W. M. Cunningham has been transferred from the Sialkot Cantonment to the Murree Hills. Captain W. W. Boyce has been appointed to the Aldershot Command. Captain C. M. Rigby has been appointed to officiate as Surgeon to the Governor of Bombay. Captain J. D. Bowie has been appointed to the staff of the Military Hospital at Calcutta.

Lieutenant A. F. C. Martyn has embarked for Egypt. Lieutenant O. W. J. Wynne has been appointed Specialist in Advanced Operative Surgery to the Eighth (Lucknow) Division. Lieutenant R. B. Price, Lieutenant J. B. A. Wigmore, and Lieutenant J. Hare have been placed under orders for service abroad. Lieutenant A. G. Bigham has been transferred from York to the Military Hospital at Rawal Pindi. Lieutenant H. F. Panton has been transferred from Lahore to the Mhow Division. Lieutenant R. W. Vint has been appointed to the Military Hospital at Lucknow Cantonment. Lieutenant W. O. W. Ball has been placed in medical charge of the Cavalry Barracks at Longmoor.

INDIAN MEDICAL SERVICE.

The King has approved of the retirement of Surgeon-General Aylmer Martin Crofts, C.I.E., K.H.S. (dated May 25th, 1914).

Lieutenant-Colonel L. F. Childe has been appointed Principal of the Grant Medical College at Bombay. Lieutenant-Colonel C. A. Johnstone has joined at Mhow. Lieutenant-Colonel W. D. Sutherland has been appointed Imperial Serologist. Lieutenant-Colonel P. Carr-White has been appointed Residency Surgeon and Assistant to the Resident in Nepal State. Lieutenant-Colonel H. B. Melville has been placed on special deputation duty at Delhi. Lieutenant-Colonel J. Jones has joined at Bombay. Lieutenant-Colonel G. Y. C. Hunter, superintendent of the Central Prison at Buxar, has been granted six months' extension of leave.

Major T. S. B. Williams has been appointed Residency Surgeon to Gwalior State. Major A. M. Fleming, civil surgeon at Jubbulpore, has been appointed to officiate as Superintendent of the Central Prison at Jubbulpore during the absence of Captain W. J. Powell, transferred to the Central Research Institute at Kasauli Cantonment. Major R. F. Baird has been appointed to hold civil medical charge at Benares Cantonment. The services of Major A. W. Greig have been placed permanently at the disposal of the Government of the Punjab for employment in the Prison Department. Major S. Hunt has been appointed Residency Surgeon in the Persian Gulf. Major F. S. C. Thompson has been appointed Superintendent to the Central Jail at Alipore.

Captain W. H. Odlum has been appointed Medical Officer to the 30th Lancers. The services of Captain H. H. King have been placed temporarily at the disposal of the Director-General for employment on special duty in connexion with the prevention of malarial fevers. Captain C. L. Dunn, Deputy Sanitary Commissioner to the United Provinces of Agra and Oudh, has been granted eight months' leave of absence home from India on medical certificate. Captain R. A. Chambers has taken up duty as Staff Surgeon at Bangalore. The services of Captain A. F. Babonau have been placed temporarily at the disposal of the Chief Commissioner of Assam for civil employment in the Medical Department. Captain T. H. Bonnar, civil surgeon to the Garo Hills District, has been appointed Magistrate in that area. Captain J. F. Boyd has been appointed to officiate as Civil Surgeon to the Bareilly District.

SPECIAL RESERVE OF OFFICERS.

Royal Army Medical Corps.

The undermentioned Captains to be Majors:—William H. G. H. Best (dated April 30th, 1914). James C. Furness (dated June 18th, 1914).

The undermentioned to be Lieutenants (on probation):—Cadet George Harold Rossdale, from the Oxford University Contingent, Officers Training Corps (dated June 3rd, 1914). Henry Cuthbert Bazett (dated June 19th, 1914).

TERRITORIAL FORCE.

Royal Army Medical Corps.

2nd South-Western Mounted Brigade Field Ambulance, Royal Army Medical Corps: Lieutenant Rupert Waterhouse to be Captain (dated Oct. 15th, 1913).

1st West Lancashire Field Ambulance, Royal Army Medical Corps: Samuel McCausland to be Lieutenant (dated June 1st, 1914).

1st London (City of London) Field Ambulance, Royal Army Medical Corps: Cadet Lance-Corporal Eric Donaldson, from the University of London Contingent, Senior Division, Officers Training Corps, to be Lieutenant (dated July 11th, 1914).

2nd London Sanitary Company, Royal Army Medical Corps: William John More Slowan to be Lieutenant (dated June 9th, 1914).

For attachment to Units other than Medical Units.—John Livingston to be Lieutenant (dated May 23rd, 1914).

Attached to Units other than Medical Units.—Maurice Cameron Anderson to be Lieutenant (dated June 11th, 1914). Lieutenant Kenneth Mackinnon resigns his commission (dated July 11th, 1914).

JOURNAL OF THE ROYAL ARMY MEDICAL CORPS.

The July issue of this journal opens with a paper on Humidity and Heatstroke, by Colonel R. J. S. Simpson, C.M.G., which is intended to be read in connexion with Dr. M. S. Pembrey's article on Heatstroke in the June issue of the same journal. Major H. Ensor, D.S.O., writes an interesting description of a Day's Work on the Sudan Sleeping Sickness Commission, and Major J. C. B. Statham contributes a Report on a Series of 833 Medical Pyrexias occurring in the Sierra Leone Garrison during the period October 1912–1913, with remarks on the bearing of these diseases on the health of the troops. An important joint communication by Major S. L. Cummins, Captain C. J. Coppinger, and Lieutenant A. L. Urquhart appears under the title of Further Observations on the Presence of Antibodies for Micrococcus Melitensis in the Milk of English Cows. The paper is a report in some detail on the milk of one of a series of 7 cows from a London dairy examined for agglutinins. Two of these animals gave positive results, one of which, Cow 5, was found to agglutinate micrococcus melitensis in dilutions varying from 1 in 250 to 1 in 1000 on different dates. In the result the milk, whey, and blood serum of Cow 5 behaved towards micrococcus melitensis in a manner comparable to the body-fluids of animals suffering from, or immunised against, this organism, due allowances being made for differences in concentration of "antisubstances" and degrees of immunity. Colonel R. H. Firth discusses Osmosis in an article complementary to one on Colloids and Solutions which he contributed to a previous issue.

DEATHS IN THE SERVICES.

Staff-Surgeon Archibald Leslie Archer, R.N. (retired), at his residence, 2, Donegal-terrace, Stoke, Devonport, on June 17th, in his 87th year. Shortly after graduating as M.D. Edin. in 1849 he entered the Royal Navy as assistant surgeon. He served on H.M.S. *Nile* in the Baltic Sea during the Russian war of 1854–55, and was awarded the Baltic medal. He retired from the service in 1860. Staff-Surgeon Archer took a great interest in all public matters in Devonport; he was formerly a member of the local town council and on the honorary staff of the Royal Albert Hospital. In 1888 he was appointed assistant actuary to the Royal Naval Annuitant Society at Devonport.

EPSOM COLLEGE: FOUNDER'S DAY.—The President of the College, the Earl of Rosebery, K.G., is expected to attend the annual prize giving on July 25th, the last over which the present headmaster will preside. There will be service in the College chapel at 2.45 P.M., and the prizes will be distributed in the big schoolroom at 3.15.

THE GOVERNMENT OF INDIA'S SANITARY POLICY.

(FROM A SPECIAL CORRESPONDENT.)

THE Government of India have issued an important resolution on the subject of sanitary progress and development in India. The resolution lays down three broad principles on which sanitary work must proceed in India. It must rest on a knowledge of the people, their conditions of life, their prejudices, social customs and habits, their surroundings and financial means, and it must secure their coöperation. It must recognise the diversity of local conditions in a country which includes numerous communities, castes, and creeds, which exhibits almost every variety of climate, temperature, humidity, and level of subsoil water. Its introduction must be preceded by preliminary local surveys, inquiry, or experiment. The policy of the Government of India is to keep the control of research under itself, but to decentralise other branches of sanitation.

It then proceeds to consider the present state of our knowledge with respect to all the principal diseases of India, and also on such subjects as infantile mortality, vital statistics, urban sanitation, conservancy, water-supply, drainage, epidemic diseases, pilgrim centres and pilgrimages, the adulteration of food and drugs, adulteration of milk, town planning and relief of congested areas, and rural sanitation. On each point it indicates the state of knowledge so far reached and the broad lines of the policy which should be pursued in future. It concludes with the expression of the opinion that the diffusion of sound education will remain a most potent and penetrating instrument of sanitation among a population which still views it for the most part with hostility or unconcern.

Investigations into the Causation and Prevention of Disease.

Research is slowly lifting the veil which hides the secrets of disease and mortality and opening up fields of inquiry scarcely thought of a generation ago. In 1902 a research institute was founded at Guindy, in Madras, named the King Institute after Lieutenant-Colonel King, C.I.E., I.M.S., in view of his devoted efforts in the cause of sanitation in that presidency. The Central Research Institute has been established at Kasauli. The Plague Research Laboratory at Parel has been extended and re-equipped, and is now the bacteriological laboratory for the Bombay Presidency; and a proposal is under consideration to attach to it a school of tropical medicine. A research laboratory and school of tropical medicine are under construction at Calcutta. Pasteur institutes exist at Kasauli and Coonoor. A third is about to be established in Burma, and it is under discussion to establish others in Assam (where it will be combined with a research laboratory) and Bombay.

Besides the routine work connected with the bacteriological diagnosis of disease, antirabic treatment, the manufacture of various vaccines and sera, and general research, these laboratories at different times have been centres of many special investigations, notable amongst which are those on plague and enteric fever. It is hoped that before long each province in India will have a laboratory fully equipped for research. The foundation of the Indian Research Fund Association in 1911 has marked an important era in sanitary progress. The association has been active and can already point to some achievement. Out of an income of Rs.15 lakhs (£100,000) received since its incorporation and up to the end of 1913–14, an expenditure of over Rs.14 lakhs (£93,333) has been sanctioned. In 1911 Major S. P. James, I.M.S., was deputed to study yellow fever in its endemic area and to draw up proposals for protecting India against the introduction of the disease. These proposals are still under consideration. In the meanwhile stegomyia surveys have been carried out in Calcutta, Bombay, Madras, Karachi, Rangoon, and other seaports. Antimalarial schemes based on preliminary surveys have been carried out at a cost of Rs.6,02,000 (£40,133). Investigations are at present in progress into the problems connected with the prevalence of cholera, kala-azar, dysentery, leprosy, and goitre.

Malaria and Plague.

The report states that the conditions and causes underlying the prevalence of malaria vary greatly in different places, and no one antimalarial measure is suitable for all. Quinine both as a prophylactic and curative agent is of great value to the individual. Its powers of saving life, alleviating sickness, and destroying sources of infection cannot be overestimated. There should be no relaxation of the efforts to educate the people in the use of the drug, and its sale by shopkeepers in rural areas might well be encouraged. The regular administration of quinine to children in schools during the malarial season is a practical measure of easy application and of proved ability; it is valuable alike for its immediate good effects on the health of the scholars and as a means of spreading knowledge of the use of quinine. The treatment of permanent collections of water is important whether it be effected by water tidiness, through sloping of banks and clearing of weeds, or stocking with fish of proved ability as mosquito destroyers or by both methods.

As regards plague, the chief conclusions that have been reached so far may be summarised as follows. In India, where the pneumonic form of the disease is relatively rare, plague is essentially a disease of rats communicable to man and a few of the lower animals; an epidemic amongst men is directly dependent upon an epizootic among rats. Plague spreads from rat to rat and from rat to man through the agency of the rat-flea. The plague bacillus under natural conditions does not long retain its vitality outside the body of the rat, the rat-flea, or man. Plague has a definite seasonal prevalence, generally constant for any given place, but varying in different parts of India; investigation shows that the plague season coincides with the season of maximum prevalence of rat-fleas. Infection is carried from place to place only over short distances by the spontaneous movement of rats; in other cases infection is carried either (*a*) by the agency of man or personal effects acting as a means of transport for infected fleas; or (*b*) by means of merchandise, which may contain rats as well as fleas. It is not yet established which of these two agencies is the more important, but recent work, both in India and the Far East, has emphasised the importance of grain as a vehicle for the transmission of infection.

In comparatively few places in India does plague infection survive the adverse conditions of the non-epidemic season: such places are usually either (*a*) large towns, or (*b*) places which have been infected late in the epidemic season. In places which have suffered from repeated and severe epidemics of plague the rats have become less susceptible to plague than are the rats in places which have remained plague-free or have suffered but slightly. These conclusions, says the resolution, have been arrived at after much careful and painstaking research, and constitute a great advance on the knowledge of plague which was available when in 1896 it first appeared in Bombay. They point apparently to a simple solution of the plague problem—no rats, no plague.

Urban and Rural Sanitary Problems.

The resolution then deals with other diseases, infantile mortality, scavenging, and the adulteration of food. While much has been done to provide drainage and pure water in large cities, there can be little hope of improving their sanitary condition permanently until measures are taken to relieve congested areas and to provide broader streets and buildings more open to sun and air. The constitution in 1898 of the Improvement Trust in Bombay marked a notable step in advance. By the end of 1912–13 the Bombay Trust had incurred an expenditure of Rs.488 lakhs (£3 253,333) towards schemes aggregating 802 lakhs (£5,346,666). Broad roads have been driven through the heart of the city, slum areas have been abolished, and dwellings provided for the accommodation of the poorer classes.

The difficulties which surround rural sanitation in India are well known and persistent. Contaminated sites, polluted water-supply, badly constructed and insanitary dwellings, and the habits and prejudices of the people raise obstacles to progress, which in most provinces are still well-nigh insuperable. The Government of India have informed local governments that they are at liberty to expend a portion of the imperial grants for urban sanitation on rural sanitation, provided practical schemes for this purpose are forthcoming, but they have postponed special imperial grants for this

purpose until such schemes are more generally advanced. They fully appreciate the enormous importance of rural sanitation in a country which is mainly agricultural. Past experience and present conditions, however, indicate that the subject is still one for experiment on lines conceived to attract the coöperation of the people. Without their cordial help no sanitary staff could effectively deal with the village sanitation of the 220,000,000 who inhabit rural areas in British India. The danger of employing low-paid and imperfectly trained subordinates in a matter so closely affecting village life is now generally recognised and should never be out of mind.

The resolution then points out the importance of education and concludes: There is room for many workers in the sanitary field. The Governor-General in Council appeals with confidence to all who are interested in the well-being of India to join with him and the local governments in a sustained endeavour to give effect to His Imperial Majesty's most gracious wish that the homes of his Indian subjects may be brightened and their labour sweetened by the spread of knowledge with all that follows in its train, a higher level of thought, of comfort, and of health.

Home and Foreign Notes.

(FROM OUR OWN CORRESPONDENTS.)

MANCHESTER.

A Visit of American Surgeons.

A PARTY of American surgeons visited Manchester on July 8th. The visit was organised by the American Gynæcological Society in order that its members might have the best opportunity of seeing the work which is being done in their own departments away from home. Most of the chief cities and universities of the United States sent representatives to Manchester, which is one of the five cities in England and Wales on the definite programme of the visitors. The Royal Infirmary, the St. Mary's Hospital, and the Lying-in Hospital were visited. At the Royal Infirmary our visitors were obviously much impressed by the arrangement and the very thorough equipment of the spacious buildings. The homeliness and comfort obtained simultaneously, and the decoration of the wards with flowers appealed to them. Surprise was expressed that, as usual, the public hospitals in this country have no accommodation for private patients who might wish for more luxurious surroundings. What, however, pleased the surgeons most was that they saw in the operating theatres of the institutions they visited "swift, skilful, and expert operating," and "sane, wise, direct, careful work"—I quote their flattering words.

Increase of Medical Students at Manchester.

The graduation ceremonial took place on July 4th. From the annual reports issued by the Vice-Chancellor we find that in the Faculty of Medicine during the session 1913–14 there were 305 students of medicine, 34 being women. In the Faculty of Medicine 129 students were working in preparation for the examinations of Manchester University; 4 for the University of London; 6 for other universities; 3 were preparing for the Fellowship of the Royal Colleges of Surgeons of England; 2 for the F.R.C.S. of Edinburgh; 2 for the L.S.A.; 33 were preparing for the Conjoint Examination of the Royal College of Physicians and Surgeons of England; 2 for the Diploma in Psychological Medicine; 3 for the Degree in Dentistry; 57 for the Diploma in Dentistry of Manchester; 13 for the Diploma in Dentistry of the Royal College of Surgeons of England; 53 were working in the following special departments—viz., pharmaceutical, 3; public health, 46 (37 of these were preparing for the Diploma in Public Health, 4 for the Diploma in Veterinary State Medicine, 7 for the tuberculosis course, and 5 carrying out research); and 4 were taking special medical courses. The number of beginners in medicine was considerably above that of previous years. The total number of students during the academic year was 1654.

Successful Appeal for the Radium Scheme.

At one time it seemed that the Manchester radium scheme might have to be either abandoned or postponed until the necessary £25,000 was obtained. The results of the initial appeal fell far short of the expectations of the committee. The address of Dr. Dawson Turner gave an enormons impetus to the scheme; the striking feature, however, is what has been done largely through the enterprise of the newspapers, more especially of those controlled by Messrs. Hulton and Co. All the arts, devices, and carefully worded appeals that energetic journalists know well how to employ have been used with almost magical and immediate results. For a long time there was a standstill at £8000. A "Radium Day" was instituted in Manchester and other towns; and appeals were made in all directions. As the cause was good, Manchester and the neighbouring towns have responded most handsomely, and the working men and women have contributed according to their means. In a little over a fortnight the total contributions have increased from £8000 to £18,450. The Joint Committee have appointed Mr. Hartley Lupton, of the Physical Laboratory of the University, to be physicist in charge of the radium department about to be instituted in the Royal Infirmary, while Dr. Marsden, of the same laboratory, will be consulting physicist. The department will be got ready under their direction, and it is hoped that an initial supply of radium will be available in October.

Poor-law Children and Ophthalmia.

Owing to the prevalence of ophthalmia amongst Poor-law children in Crumpsall, and also to the fact that there were more children at Crumpsall than there is accommodation for, the Manchester board of guardians decided on July 8th to ask the sanction of the Local Government Board in respect of the purchase of a building at a cost of £7250 to be used for children suffering from ophthalmia. The situation ought to be relieved by the proposed facilities for isolation of the affected children.

Lancashire and the Annual Factories Report.

The annual report of the Chief Inspector of Factories, which was issued on July 8th, contains some remarks which have a special interest for Lancashire. The total number of persons employed in factories was 4,488,774 and in workshops 638,335. Textile factories accounted for 18,323 accidents and non-textile factories for 146,495. It is stated that from 25 to 40 per cent. of all industrial accidents are preventable if all practical means are taken. The establishment of safety committees of men and officials is recommended. Action is being taken in the cotton area in regard to the lifting of heavy weights. Cases are mentioned of children lifting skips of cotton weighing 56 lb., and of others of 13 to 16 years of age lifting up to 82 lb. As to the removal of dust, it is stated that the cotton industry can claim one of the greatest successes in regard to the removal of the dust factor as a cause of many diseases. In regard

to carding engines, the report states: "It is literally true that the conditions of life have been entirely changed for many strippers and grinders, and all who have been connected with the carrying out of this reform (whether operative, employer, or inspector—and all have had a hand in it) must look with intense satisfaction upon the results of their labours."

Small-pox in Several Lancashire Towns and some Indirect Consequences.

Some time ago there were a number of cases of small-pox in Milnrow, one case also occurred in Salford, two cases at Marland and Rochdale, and another at Oldham. There was one death from small-pox at Rochdale, this being the fifth case since the outbreak a month ago. The Rochdale patient who died was an unvaccinated child who had been taken to the Marland Fever Hospital to be treated in the fever section for scarlet fever. The health committee has decided that so far as practicable no further small-pox cases are to be treated at the fever hospital. Four cases —including the fatal one—have been reported from the vicinity of the fever hospital. One case is reported from Colne. The Rochdale board of guardians has been informed by the Lancashire asylums board that no lunatics from that district can be received in any of the five county asylums in consequence of the existence of small-pox in Rochdale union. These outbreaks have excited some alarm at the seaside resorts to which Lancashire people at this season flock in their thousands. To allay this alarm the Rochdale Trades Council decided to send a resolution to the trades councils at the various health resorts pointing out that the reported cases were of a mild type.

July 14th.

BRISTOL AND WESTERN COUNTIES.

A New Hostel for the University of Bristol.

THE University of Bristol has during its brief career already acquired various premises for use as residential hostels. Their latest purchase is the Imperial Hotel, which stands close to Clifton Down station, at a distance of about half a mile from the main buildings of the University itself.

Bristol Royal Blind Asylum.

As was stated in these columns a short time ago, the Bristol Blind Asylum is issuing an appeal for funds to create a capital sum, the interest of which is to be used for supplementing the wages of the blind workers of the institution from 9*s.* 9*d.* per week for men and 4*s.* for women to £1 and 12*s.* 6*d.* respectively. In order to realise this object increased subscriptions will be needed, as well as an endowment fund of £20,000. Half this sum has been anonymously promised on condition that the remainder is forthcoming, and additional promises totalling almost £4000 have also been made.

Working Hours of Nurses.

The Bristol health committee has approved of substantial reductions in the working hours of the nurses in the city isolation hospitals, a matter in which Bristol has been behind other large towns. This, if adopted, will necessitate an increase in the staff, and it cannot therefore take effect till further accommodation can be provided.

Memorial to Dr. Edward Adrian Wilson.

Last week, at Cheltenham, Sir Clements Markham, K.C.B., formally unveiled the statue in bronze of the late Dr. E. A. Wilson in the presence of a large and distinguished gathering. Dr. Wilson is represented in Polar dress, and the statue is 7 ft. high, on a pedestal of equal height, and was designed by Lady Scott. The inscription is as follows:—

Edward Adrian Wilson, B.A., M.B. Cantab., F.Z.S., born in Cheltenham 1872. Chief of the Scientific Staff, Artist, and Zoologist of the British Antarctic Expedition, 1910–13. He reached the South Pole January 17th, 1912, and died with Captain Scott on the great ice barrier March, 1912. "He died, as he lived, a brave true man, the best of comrades, and staunchest of friends" (letter from Captain Scott).

The Proposed Tuberculosis Hospital at Torquay.

Considerable opposition is manifested locally against the proposal of the Devon county council to erect a county tuberculosis hospital at Torquay. The Torquay town council has also protested against the scheme, and owing to the requisitions of ratepayers the Local Government Board has decided to hold an early inquiry into the matter.

The British Dental Association.

The annual meeting of the Western Branch of the British Dental Association was recently held at the Devon and Exeter Hospital, Exeter, under the presidency of Mr. R. Willcox (Clifton). There was a good attendance. Mr. Willcox in his address alluded to recent changes which had taken place in dentistry, and which had brought dentists into closer coöperation with the medical profession. Mr. W. H. Goodman (Exeter) was later inducted to the presidency and gave an interesting paper on Anæsthetics in Dental Surgery.

Royal Devon and Exeter Hospital.

The committee of the Royal Devon and Exeter Hospital has issued a strong appeal for £10,000 for making several improvements to the institution, including the erection of a new wing. Up to the present nearly £1300 have been promised.

Death of Mr. H. B. Mugliston.

Mr. H. B. Mugliston has recently died at his residence, Brent Knoll, Somerset, where he practised. He was the son of Mr. G. T. W. Mugliston, surgeon, formerly of Pinner. After qualifying Mr. Mugliston held the appointment of house surgeon at the London Hospital. He was afterwards called to the Bar and joined the South-Eastern Circuit. He then went to Tasmania and entered into the political life of the island, being a prominent member of the Legislative Assembly. Mr. Mugliston later resided in Australia, and subsequently came to Brent Knoll, where he was highly esteemed.

July 14th.

IRELAND.

Tuberculosis in Ireland.

ALTHOUGH the death-rate from tuberculosis in Ireland is steadily falling it still remains lamentably high. In the year 1912, according to the reports of the Registrar-General for Ireland, 9437 deaths were registered as due to tuberculosis, being 2·15 per 1000 of the population. The whole question is critically considered by Sir John Moore in two papers recently published.[1] He points out that although Ireland was the first division of the United Kingdom to apply the principle of

[1] Notification of Tuberculosis in Ireland and the Reasons Therefor. Dublin Journal of Medical Science, May, 1914. Tuberculosis in Ireland and the Crusade against it. Interstate Medical Journal, vol. xxi., No. 4, 1914.

notification to tuberculosis by means of Act of Parliament, that notification was permissive and not compulsory. The Tuberculosis Prevention (Ireland) Act of 1908 allows any urban or rural sanitary authority to adopt notification subject to the approval of the county council. Ireland is divided into 311 districts for public health and local government purposes, and of these up to March 1st, 1914, only 55 have adopted the principle of notification—viz., three county boroughs, 20 urban districts, and 32 rural districts. An attempt was made in 1912 to render notification compulsory through the medium of an amending Bill rendered necessary to facilitate the treatment of insured persons under the National Insurance Act of 1911. The compulsory notification clauses were strongly opposed and had to be deleted. The Irish Local Government Board, commenting on this, observed: "It is much to be regretted that compulsory notification had to be omitted, as it leaves this country (Ireland) in the unfortunate position of being the only portion of the United Kingdom where it is not in force, although the disease is more prevalent in Ireland and consequently is more urgently needed." Sir John Moore shows that even in some districts where notification has been adopted, the notifications fall far below the recorded number of deaths; he concludes, therefore, that many cases of pulmonary tuberculosis are not notified at all in the largest cities of Ireland. He urges very strongly that for the crusade against tuberculosis in Ireland to be successful the following measures should be carried out. Notification of all forms of the disease should be made compulsory in all parts of the country. Whole-time county medical officers of health should be appointed, independent of local influences and responsible only to the Irish Local Government Board. The system of district nurses should be extended, and trained female sanitary inspectors should be appointed. An effective domiciliary treatment should be arranged for cases which cannot be accommodated in institutions, and instruction as to the rules of life should be widely given. Lastly, he points out the importance of the housing problem. Some statistics which he quotes give point to many of his recommendations. The Registrar-General for Ireland, Sir William Thompson, in his report for 1912, shows that in the Dublin registration area the death-rate from all forms of tuberculosis classified according to social state was as follows: in the professional and independent classes, 0·41 per 1000; among the middle class, 1·92 per 1000; among the artisans and petty shopkeepers, 2·94 per 1000; and among the general service class, 3·16 per 1000. Sir John Moore writes with conviction, and has made out a very strong case for the measures which he recommends. There can be no doubt that if they were effectively carried out the incidence of tuberculosis in Ireland would be greatly lessened.

Irish Medical Committee.

The first meeting of the new Irish Medical Committee was held in the Royal College of Surgeons of Ireland on July 14th. Dr. P. J. Macnamara, of Kilmallock, was appointed chairman for the ensuing year, and Dr. Johnson, of Belfast, vice-chairman. Mr. Gick, secretary of the Irish Medical Association, and Dr. Henessey, organising secretary of the Irish Committee of the British Medical Association, were appointed joint secretaries of the committee. The following subcommittees were appointed: Finance and executive, sanatorium benefit, matters affecting the Poor-law medical service, and hospitals.

Queen's University of Belfast.

The fifth graduation ceremony of the Queen's University of Belfast was held on July 9th, when, in the absence of the Chancellor, the Earl of Shaftesbury, K.C.V.O., the Vice-Chancellor presided, and the various degrees were conferred. At a meeting of members of convocation held on the same day it was decided to nominate a number of gentlemen for election as members of senate (convocation having the power to select eight). The following four members of the medical profession were chosen: Dr. R. W. Leslie, Dr. W. Calwell, Dr. John W. Browne, and Dr. T. S. Kirk.

Rainfall in Belfast for June.

During the past month of June rain—to the amount of 1·52 inches—fell on 16 days in Belfast, making a total of 15·55 inches for the present year. This rainfall for June is distinctly below the average for that month (3·06 for the previous 39 years); indeed, the total amount of rainfall registered for 1914 is only 15·55 inches, the amount for 1913 up to the same time (half a year) being 21·50 inches.

Public Abattoir at Ballymoney.

The committee appointed by the urban council of Ballymoney to inquire into the question of a public abattoir has sent in a very full report, in which they state that the present condition of matters made it obligatory for the council, as the sanitary authority, to take steps to have a public abattoir erected in Ballymoney. Consideration of the proposal was adjourned to September.

July 14th.

SCOTLAND.

Royal Visit to the Hospitals of Glasgow.

As I briefly recorded last week, the city of Glasgow, and the hospitals in particular, were honoured by a visit from the King and Queen, accompanied by their daughter Princess Mary. As Prince of Wales, His Majesty in 1907 laid the foundation-stone of the new Royal Infirmary, and last week he formally opened the building as the Glasgow Memorial of the Diamond Jubilee of Queen Victoria. Before leaving the infirmary a deputation from the Royal Faculty of Physicians and Surgeons of Glasgow presented an address to the King. After lunch a visit was paid to the new buildings of the Royal Hospital for Sick Children. The chairman of the directors presented the King with a key with which to unlock the door and declare the building open, and thereafter a minute inspection was made of the hospital. Later in the day brief visits were paid to the Western Infirmary and to the University, where Lord Rosebery, as Chancellor of the University, presented the Principal and several members of the Senate to Their Majesties.

Lister's Operating Theatre.

At a meeting of the Glasgow University Court it was announced that the managers of the Royal Infirmary were willing to accede to the request of the University Court that they might obtain the materials of the Lister ward and operating theatre in the old building of the Royal Infirmary. It is intended that the ward and theatre be reconstructed at the University as a memorial of Lord Lister's work.

Graduation Ceremony at the University of Aberdeen.

The summer graduation at the University of Aberdeen took place on July 8th, at the same time as the ceremony of installing Lord Elgin as Chancellor in succession to the late Lord Strathcona. Lord Elgin was introduced by Mr. D. M. M. Milligan, and Principal George Adam Smith, the Vice-Chancellor, amid much enthusiasm, administered the oath. In his address Lord Elgin alluded to his call from Mr. Carnegie, the present Rector of the University of Aberdeen, who was present to take the chairmanship of the Carnegie Trust and to the growing success of the trust. The Principal and Mrs. George Adam Smith entertained the honorary graduates to luncheon, and in the afternoon a garden party was held at Chanonry Lodge, when the members of the University had an opportunity of meeting Lord and Lady Elgin and the Rector and Mrs. Carnegie. In the evening the Chancellor was entertained to dinner by the University in the Portrait Gallery of Marischal College. There was a large and distinguished company. The Principal, in submitting the toast of the evening, stated that Lord Elgin was the thirty-eighth Chancellor since the foundation of the University and King's College in 1494. After alluding to the long and illustrious line of chancellors Principal Smith said that few political careers, either in our own time or at any previous period, had been tested, as Lord Elgin's was, by the emergence of sudden and terrible crisis of the severest kind in India.

Death of Dr. J. F. Robertson.

The death occurred at Lerwick, on July 10th, of Dr. John Fordyce Robertson, after a brief illness. Though in somewhat impaired health he was able to attend to his professional duties up to July 6th, when he was stricken with pneumonia. Dr. Robertson was educated at the Anderson Institute, Lerwick, and at Edinburgh University, where he was a brilliant student. Very soon after he graduated he started private practice in Lerwick, where he soon became a very popular and busy practitioner. He held the rank of captain in the R.A.M.C.(T.), and gave freely of his scanty leisure to further the affairs of the local Territorials, by whom, as by the general public, he was held in high esteem.

July 14th.

PARIS.

The Social Adaptability of Defectives.

IT is often said that the sacrifices made for the education of backward and mentally abnormal children are too often sheer waste, and that the results of this special training are only too commonly deceptive. M. Roubinovitch, who is the chief physician of the hospital school of Bicêtre and of the Vallée foundation, has communicated to the Academy some figures that show the real success which may be attained in a considerable proportion of such children. These are the "educable" children, among whom may be obtained, by rationally directed efforts, a complete adaptation to social life. The clinical history of 14 of these mentally abnormal subjects, affected at the time of their admission with mental debility, simple or complicated with instability or with various perverted instincts, is in this respect very convincing. These defectives, after a stay of from 3 to 12 years in the institutions, show such physical, intellectual, and moral improvement that they may be restored to ordinary life, to which they are perfectly adapted. Of these 14 children, 8 girls are now satisfactory housekeepers, domestics, or washerwomen, while 6 boys are good carpenters or shoemakers. In all, heredity must be accepted as the principal factor in their inferiority, but treatment, as may be seen, is not useless. These useful hospital schools would be much more valuable if they were not encumbered with a considerable proportion of idiots and incurable imbeciles, giving the impression that the expense is out of all proportion with the results to be obtained.

Thyroid Grafting in a Myxœdematous Child.

Dr. Voronoff, of Nice, who reported to the last Congrès de Chirurgie a completely successful case of ovarian grafting, has communicated to the Academy of Medicine the results of thyroid grafting in a child aged 14 years, affected with myxœdema from the age of 8 which followed on scarlet fever. The disease, besides the classic physical signs, was accompanied by a total arrest of intellectual development. The child was feeble, apathetic, and stupid, incapable of attention and of mental work. Dr. Voronoff engrafted in the neck a lobe of the thyroid from a monkey (*Singe papion*), attaching it by a large number of delicate sutures, but without anastomosing the arteries of the gland directly with those of the child, according to Carrel's method. This graft succeeded well, and new vascular connexions were rapidly established between the engrafted tissue and the subject. An interesting point is that, little by little, not only did the physical characters of myxœdema disappear, the obesity diminish, the puffy countenance become oval, the thick lips become thin, and the eye take on a live and alert look, but the intelligence also developed in like manner. The child became attentive and studious, and in six months its intellectual status had become entirely normal. Dr. Voronoff performed this operation at the Clinique Ste. Marguérite of Nice before a considerable number of medical men. He thinks that this method may become general, and that it will provide a mode of treatment in myxœdema more certain and more definitive than the internal administration of thyroid preparations, as hitherto used.

Death of Dr. Duguet.

Dr. Duguet has died at the age of 77 years. He had been professor agrégé at the Faculty of Medicine and subsequently médecin des hôpitaux. At the close of his career he had for a long time occupied the post of head physician of the Hôpital Laribosière. He was vice-president of the Académie de Médecine, and would have been its president next year. He leaves behind him the memory of a learned clinician, whose researches have covered various parts of internal pathology, particularly that of diseases of the heart.

July 13th.

BERLIN.

Congress of the Medical Societies.

THE Congress of the Deutscher Aerztevereinsbund, held in Munich in connexion with the Leipziger Verband from June 25th to 27th, was especially remarkable from the fact that the subject of club practice, which has played so prominent a part in preceding congresses, was hardly discussed at all, the matter being now regulated by an agreement throughout the empire. One of the principal subjects of discussion concerned a motion brought before the Congress by the Dresden section, that medical coöperation free of charge with so-called

charitable institutions ought to be made dependent on the consent of the local medical association. The motion was agreed to with an amendment excepting the Red Cross Society, subject to the condition that members of the Red Cross trained by medical men shall pledge themselves not to settle in practice as unqualified practitioners. In the discussion it was pointed out that certain institutions which required the help of the medical profession free of charge do not expect gratuitous services from other persons. Other subjects dealt with were the unsatisfactory position of midwives, and the courts of honour for medical officers of the reserve, which are exclusively composed of medical officers of the active army without the participation of the reserve medical officers. The struggle against quackery and unqualified practice also came up for discussion, the annual fee for members being raised 1 mark, the additional amount thus collected to be exclusively devoted to this purpose. The social side of the meeting was especially remarkable for a concert given by the medical orchestra of Munich, the performers all wearing operating dress. Dr. von Bary, formerly a medical man and now member of the Royal Opera of Munich, took part in the performance.

Statistics of Berlin University.

At the University of Berlin 8537 students have been matriculated this summer, or 500 more than in the preceding summer. The number of women students has especially increased, being 841, as against only 709. The theological faculty has 511 men and 2 women students, the faculty of laws 1564 men and 17 women, the medical faculty 2130 men and 176 women, and the philosophical faculty 3491 men and 665 women. The report further states that 5545 men and 665 women were Prussian, 897 men and 69 women Germans from other States of the Empire, 203 men and 21 women were Austrian, 502 men and 40 women Russian, 62 men and 4 women came from Roumania. 56 men and 3 women from Switzerland, 35 men and 1 woman from Turkey, 34 men from Greece, 33 men and 5 women from Servia, 30 men from Bulgaria, and 26 men and 5 women from England. From America came 109 men and 20 women, from Asia 80, from Africa 12, whilst Australia was not represented at all this summer.

July 13th.

KING'S COLLEGE HOSPITAL.—The following are the senior scholarship and prize examination results: Senior scholarship, Tanner prize in diseases of women, &c., class prize in diseases of children, D. J. Platts; Jelf medal, Todd prize in clinical medicine, class prizes in medicine, obstetrics, pathology, hygiene, and psychological medicine, E. Watson Williams; class prize in forensic medicine, H. Rivers Pollock.

CENTENARIANS.—The death occurred at Brighton (at the house where he had resided since his retirement from the Bar in 1864) on July 13th of Mr. William Augustus Gordon Hake at the great age of 103 years 3 months. Of late years he had suffered severely from bronchial trouble, but so remarkable was his vitality that he withstood the attacks again and again. An attack, however, at last brought about heart failure and a peaceful end. Mr. Hake was a native of Exeter, having been born at David's Hill on April 5th, 1811. He married in 1837 and was the father of nine children—five sons and four daughters. He was the doyen of the English Bar, having been called to the Middle Temple in 1835.—Mrs. Rebecca Clark died at Wood Green on July 4th at the age of 110, from shock after a severe thunderstorm. The aggregate ages of four of the children of the deceased who attended the funeral was 283 years.

Correspondence.

"Audi alteram partem."

ARTIFICIAL PNEUMOTHORAX: DEFECTS IN THE ACCEPTED TECHNIQUE AND HOW TO REMEDY THEM.

To the Editor of THE LANCET.

SIR,—Those who are interested in the subject of artificial pneumothorax will feel grateful to Dr. W. Parry Morgan for his praiseworthy attempt to improve on existing forms of apparatus (THE LANCET, July 11th), but before we adopt his somewhat complicated machinery we should like to be sure that the difficulties it overcomes really do exist, and also that it introduces no new dangers in place of those it is designed to remove. On neither of these points have I been able to satisfy myself in favour of Dr. Morgan's method.

The main defect which he discovers and sets himself to correct in the apparatus at present used is as follows. He contends that when the needle reaches the pleural cavity at a first operation the amount of gas entering from the manometer tubing would not suffice to produce a respiratory fluctuation were it not that the lung is always wounded by the needle and air flows in from this source. I should be far from denying that where a pointed needle is used this misadventure frequently happens in practice; indeed, Dr. Morgan brings striking testimony to prove that it has done so, even to the establishment of a "spontaneous" (!) pneumothorax, in his own practice. Such a wounding of the lung, unavoidable I think where a pointed needle is used at a first operation, is likely to be of considerable extent where the technique Dr. Morgan regards as usual is commonly followed. He says that if "movements do not appear in the manometer the needle is usually pushed forward and drawn back until they do so." This I should consider a faulty technique with any needle; if it is entered slowly with due regard to the structures it passes through, and with careful attention to the manometer, it should, in my opinion, never be necessary to draw it back save for its final removal. But I am among those who hold that a pointed needle should not be used at all at a first operation, and am in a position to show that where a blunt instrument is used and the lung certainly not wounded, yet ample respiratory movements are obtained in cases where there is a free pleural space. For at first operations I always use a small trocar and cannula; the trocar is removed as soon as the superficial structures are pierced, and the blunt cannula, which has also a side opening, is thrust forward alone through the parietal pleura which it pierces with a palpable click. With this instrument it is always clear when the pleura is passed, and it would certainly be impossible to wound the lung in cases where the pleural space is free. Yet with such an instrument the respiratory oscillation whose absence Dr. Morgan deplores is, in my experience, always present, and is maintained not only on quiet breathing, but even after deep breathing and cough, a test to which I always subject my cases before the admission of gas. The following small series of intrapleural pressures at first operations

with this blunt instrument serve to make this clear:—

W. M.	... ...	− 8 to − 16 cm.	of water.
B. E.	... ...	− 8 ,, − 22 ,,	,,
H. B.	... ...	− 4 ,, − 12 ,,	,,
A. A. G.	... ...	− 9 ,, − 13 ,,	,,
A. S.	... ...	− 7 ,, − 15 ,,	,,
A. M.	... ...	− 8 ,, − 12 ,,	,,

Only in cases of adherent pleura have I known the gas sucked out and not returned, being lost presumably among the pleural adhesions.

At the end of his paper Dr. Morgan describes his experience in certain cases where, even after the introduction of some gas, he has failed to obtain respiratory fluctuations when he has cut off the gas reservoir from the manometer. This occurrence seems best explained by a blocking of the needle, an accident which readily occurs with fine needles, such as those of the Brauns or Forlanini pattern, but is always avoidable by the use of a needle of larger bore. The blockage is usually with a piece of punched-out skin, and is generally partial in the sense that gas can be passed in but the manometer fails to record normally. Surely the fact that gas had already entered in these cases disposes of Dr. Morgan's apparent contention that it was the need of this which was responsible for the loss of the usual respiratory oscillation.

Certain further strictures which Dr. Morgan makes against the usual apparatus provided with a single water manometer seem to me to be hardly justified by the facts. For pressure with the finger and thumb on one or another rubber tube will make this manometer at once record either the intrapleural pressure, the pressure in the gas bottle, or the average pressure of the two combined, and from these it can just as well be deduced as from Dr. Morgan's two manometers, apart from watching the level of fluid in the gas bottle, whether the flow of gas continues and when it comes to a standstill. As to the risk of fluid being sucked back into the needle when the gas pressure falls to the level of the intrapleural pressure (which indeed need never be allowed), I would ask whether this accident ever occurs in practice; it has not done so to me in the needles with which I am accustomed to operate.

So much for the criticism Dr. Morgan brings against the simple water manometer with its double attachment to the needle and gas reservoir. The apparatus which Dr. Morgan would substitute for it is highly ingenious and compact, but it seems to me doubtful whether its working is not too complicated to commend it to the practical physician. To determine whether the needle is safely within the pleural cavity we are told to "take the reading of the reservoir manometer, then the reading of the intermediate, and from the second reading subtract half the difference between the first and the second." But if the needle is partially blocked two complicated formulæ must be worked out before it can be decided where the point of the needle has got to. I can assure Dr. Morgan from personal experience that the clinician is not always enough of a mathematician to remember or even to work out these formulæ at the bedside; he is likely to prefer the striking visual proof which the simple water manometer affords.

One particularly ingenious point of Dr. Morgan's apparatus is the use of flexible tubing attached to a movable reservoir to replace one arm of the water manometer; by this means the level can be so adjusted that high positive or negative pressures can be recorded on a quite short length of fixed glass tubing. I cannot help fearing, however, that the large volumed reservoir must, by its inertia, greatly damp down those respiratory fluctuations which are so important an index to the position of the point of the needle. Finally, I should have grave doubts myself as to the safety of the continuous flow of oxygen, which is, after all, the main feature of Dr. Morgan's apparatus. Gas embolism is doubtless less easily produced with this gas than with nitrogen, but can it be definitely stated that the risks of gas embolism are negligible so long as oxygen only is used? I do not believe myself that this is so, and it rests, I think, with Dr. Morgan to prove this fact before it can be admitted that his method is free from danger.

I am, Sir, yours faithfully,

Queen Anne-street, W., July 12th, 1914. CLIVE RIVIERE.

THE PLEA FOR IMMEDIATE OPERATION IN APPENDICITIS.

To the Editor of THE LANCET.

SIR,—In your issue of July 11th Mr. W. H. Battle writes:—

> I have said in a former letter that a surgeon can frequently give a correct opinion as to the pathological state of an appendix before its removal in an acute attack of appendicitis from a consideration of the history, symptoms, and local examination of a patient. Mr. Owen denied this.

Permit me to remark that I have made no such denial. For even I, who lay no claim to the gift of clinical or pathological prophecy, sometimes make a correct forecast. So do most surgeons, I suppose. But what I keep hammering at is this, that there are certain cases in which though mortification or perforation of the appendix has taken place, neither the temperature, nor the pulse, nor the aspect, nor the local condition gives warning of impending disaster. Such cases can be saved, if at all, only by immediate operation. And who can forecast them?

As I remarked in my previous letter, I have nothing fresh to say on the important matter which is being discussed in your columns, and I certainly should not have again intervened if I had not been provokingly misquoted.

I am, Sir, yours faithfully,

July 11th, 1914. EDMUND OWEN.

DEFERRED DEATH AFTER TRACHEOTOMY FOR LARYNGEAL DIPHTHERIA.

To the Editor of THE LANCET.

SIR,—In Dr. John Biernacki's interesting article in THE LANCET of July 11th on this subject there is no mention of the bronchoscope in his notes on the related treatment. The use of this instrument in cases of foreign body in the food and air passages has brought about an enormous reduction in the mortality. With some diffidence, owing to my ignorance of conditions in a fever hospital, I note some inconsistency in the paper. It is stated that "recovery is exceptional once obstruction develops to a degree which makes extraction vital," and later, "that extraction should be postponed until ..... the obstruction has become immediately dangerous." Naturally there is a wide difference between an ordinary case of foreign body and of a plug of desiccated mucus in the trachea. There being already a tracheotomy opening it appears that "lower" bronchoscopy need not subject the patient to any more strain than the process so well

described by Dr. Biernacki, and that in expert hands it would be safer and more efficient. Naturally under the circumstances the surgeon would require special protection. This, however, presents no insuperable difficulty. It seems that if more than the exceptional cases alluded to are to be saved by clearing the trachea, and possibly the bronchi, the bronchoscope should be used at an earlier stage.—I am, Sir, yours faithfully,

T. JEFFERSON FAULDER.

Harley-street, W., July 13th, 1914.

ULTRAMICROSCOPIC VIRUS.

To the Editor of THE LANCET.

SIR,—In an interesting letter by Dr. J. T. C. Nash, published in THE LANCET of July 4th, it is suggested that very minute individual micro-organisms might escape notice if lying free, but should—theoretically—be easily detected by the microscope when occurring in colonies. To the soundness of Dr. Nash's observation I can fully testify in the case of mumps and of typhus fever. For example, in the case of mumps I have in the last few days found in the fresh urine of five consecutive cases in the stage of fever minute organisms which cannot when lying free be recognised to be organisms by the ordinary 1/12th oil immersion lens. When, however, they occur in clusters an ill-defined mass can be made out, which under a 1·5 mm. apochromatic lens is readily seen to be composed of myriads of well-stained organisms varying between about 0·1μ and 0·3μ in their greatest diameter. (The etiological relationship of these organisms to mumps is now being studied in monkeys.) Similarly in typhus fever, as Dr. W. W. Ingram and I have recently reported, large clusters of minute filter-passing organisms may be seen, especially in the fresh urine and cerebro-spinal fluid, though when lying free the individual organisms are beyond the range of vision unless a specially high objective be employed.

The difficulty of recognition of individual organisms of the small size described is greatly increased if they are embedded in the highly albuminous matrix of a blood film, but is reduced to a minimum in the case of cerebro-spinal fluid and of urine. I am, Sir, yours faithfully,

The Lister Institute, July 8th, 1914. E. C. HORT.

THE CHILDREN'S COUNTRY HOLIDAY MOVEMENT AND INFECTIOUS DISEASE.

To the Editor of THE LANCET.

SIR,—May I ask you to find space for a few comments on the circular on "Children's Country Holidays," issued by the Local Government Board, and referred to in THE LANCET of July 4th? The Board draws attention to the allegation that from time to time infectious disease has been introduced or spread in country areas, and that overcrowding in country cottages has also been caused by the boarding out of town children during holiday time.

The Children's Country Holidays Fund, which sent over 45,000 London children into the country for a fortnight last summer, and since its establishment by Canon Barnett 30 years ago has provided holidays for more than 1,000,000 children, has for many years given close attention to the points mentioned in the circular. As the fund draws support from such a wide circle of sympathisers, I am sure your readers will be interested to know what regulations are laid down to avoid the dangers suggested.

1. To prevent any risk of sending children to cottages where infection or overcrowding might be possible, the Children's Country Holidays Fund allows no centre to be used unless a lady or gentleman resident in the place has undertaken supervision, and children are only sent to cottages which have been inspected by these honorary "visitors." The latter also see that the definite restrictions as to numbers accommodated in each cottage are observed, and visit the children during their stay so that no breach of the regulations may pass unnoticed.

2. The fund enjoys the coöperation of the London County Council, whose nurses inspect all the children on the score of health and cleanliness before they go away, and report three times on each child before the holiday is given.

3. Honorary assistants of the fund visit the home of every child at least once before the holidays, and in case of any suspicion of illness in the house or immediate neighbourhood a doctor's opinion is obtained. Before the children leave London their parents are required to see that they take with them a supply of clean clothes.

4. A special fund is set apart for medical assistance when required at the country centres, and this fund is drawn upon up to a specified amount in case of need for medical advice, special food, or hospital charges.

Seeing that the Children's Country Holidays Fund has been at great pains to minimise any risks attendant on its work, I should be glad if you would put this brief statement before your readers. I am, Sir, yours faithfully,

F. MORRIS,
Chairman of Executive Committee.

The Children's Country Holidays Fund, 18, Buckingham-street, Strand, W.C., July 13th, 1914.

THE WORKING OF THE NATIONAL INSURANCE ACT IN GREAT YARMOUTH.

To the Editor of THE LANCET.

SIR,—An article on Medical Practice under the Insurance Act in Great Yarmouth which appeared in your columns last month and was copied by the *Yarmouth Independent* has recently come to our notice.

As it may have given very erroneous impressions we beg leave to point out, first, that there is no evidence but that of hearsay (repeated for the last six or seven years at least) that the local Medical Institute was on the eve of collapse; second, that the National Insurance Act has not given it a new lease of life. Quite the contrary. It is true that it receives more for the insured persons it has retained, but many have left it. Further, as pointed out *ad nauseam* in the medical press, the pledge taken by the medical practitioners prior to the passing of the Act involved points on which the British Medical Association changed its ground radically, breaking its side of the pledge. Being thus left an isolated community after Norwich, Lowestoft, and the surrounding country had given in, the Great Yarmouth medicos held several meetings at which the desirability of all acting together was frequently insisted on and generally accepted. At the last of these meetings the question was put whether a panel should be formed or not. The majority voted "Aye" and expected the coöperation of their colleagues who voted "Nay"; they, however, left the meeting, entirely to the surprise of the majority. It is only fair to say that two opponents put their names on the panel next day and a third offered to do so if we required more names. Subsequently the members of the panel formed a committee to look after their own affairs. They knew it was not a statutory committee then,

and never pretended that it was one. The Local Medical Committee was formed later in due order.

Your correspondent's charge against the members of the Great Yarmouth panel, that they pressed for allocation when contracting out was on the *tapis*, is simply untrue. It was evident from the first that contracting out was not to be allowed except in a few special cases, and allocation was not mooted till several months had elapsed. We were then asked to suggest plans for this step, and had to give our views. We cannot see that the active members of the hospital staff have anything to complain of; they chose their own position and had a special warning of what was coming in a letter which appeared in THE LANCET of June 10th, 1911, p. 1606, a printed copy of which was sent to each of them. Of course, there is room for improvement in the working of the Act and much to be done in reuniting the members of the profession, but we regret to be unable to see any tendency to either of these desiderata in your article. We request that you will kindly give our letter the same publicity that it has received, and remain, Sir,

Yours faithfully,

HENRY BLAKE,
Chairman, Panel Committee.

J. IVOR SANKEY,
Honorary Secretary, Great Yarmouth Division, British Medical Association.

VALENTINE H. BLAKE,
Honorary Secretary, Local Medical Committee.

Great Yarmouth, July 13th, 1914.

*** Our Commissioner's informants will not acquiesce in the charges of untruth or of error brought in this letter.—ED. L.

THE NATIONAL MEDICAL UNION.

To the Editor of THE LANCET.

SIR,—Mr. W. L. W. Marshall writing about the National Medical Union in THE LANCET of July 11th says "support may reasonably be expected from the consultant branches of the profession."

May I point out that the National Medical Union is to a very great extent a general practitioners' movement. It depends upon the support of the practitioner who is not on the panel. As numbers of new members have recently joined, and many are joining, it will become a power in the land, representing practitioners who will have nothing to do with the medical service under the present arrangements of the Insurance Acts. But consultants look for patients from panel men as well as from non-panel men.

If consultants learn that the National Medical Union has some backbone in it, and is linking up and giving power and influence to the non-panel practitioners, they will soon support it. It will be a very independent consultant who will ignore his opportunities for fees. There will be more guineas from non-panel doctors' patients than from those doctors who have to resort to the panel. The sick members of the public are seeing to that, and members of the National Medical Union know it.

I am, Sir, yours faithfully,

Hove, July 13th, 1914. THOMAS JOHNSTON.

ISOLATION OF DIPHTHERIA CASES.

To the Editor of THE LANCET.

SIR,—Dr. E. H. Snell did good service at the recent Sanitary Congress at Blackpool when he called attention to the futility of hospital isolation. I have for many years past in my annual and special reports fought against sending this class of patient to hospital. After 27 years the hopelessness of making any advance in dealing either with scarlet fever or diphtheria becomes more apparent. In some places a sanitary authority must contend with Socialism, so-called, in others feudalism, in others clericalism, and in others all three dispensations combined. The struggle for power in each case predominates, and each faction assumes that its knowledge extends to the sphere of infective disorders and that sanitary authorities are merely the servants of the dominant faction. At the present moment the knowledge claimed about germs is prodigious and very disastrous. Last year there were 130,026 cases of scarlet fever notified in England and Wales, against 107,417 in 1912 and 104,617 in 1911, and there were 50,850 notifications of diphtheria, against 44,687 in 1912 and 47,747 in 1911. The tightening up of official rules and regulations is obviously of no avail and never will be. Disease cannot lend itself to official methods, and refuses to be strangled with official red tape. Both diseases are caused by a local infection, and it appears reasonable to suppose that attention to the toilet of the throat and the disinfection of what comes from that region and its neighbourhood is of the utmost importance. Isolation, when these points are attended to, is a simple matter, and in country districts certainly can more often than not be carried out with sufficient completeness. At the present moment in an outlying part of my district two cases of scarlet fever are being isolated in a cottage without anything dreadful occurring; about one mile away there is a second case which developed five days after the return of another patient from hospital who was sent away only because the father worked in cowsheds

In the case of both scarlet fever and diphtheria there is a continual reinfection of patients whilst in hospital, without the symptoms of the disease, from which they are protected by the original attack. The agents of disease return with the patient, in the throat, either in some degree of attenuation or without any. A transference to a suitable soil is all that is required to restore the full vigour of disease production.

As these are my views, it follows that in my opinion responsibility should rest with medical practitioners who are in charge of the patients, and that that responsibility should not be removed from them. One of the great evils resulting from the present scheme under which National Insurance is worked is, that the practitioners who are in charge of the insured persons have in too many instances more patients on their lists than time in which to treat them properly. This is not, however, a matter for which there is no remedy.

I am, Sir, yours faithfully,

July 13th, 1914. LOVELL DRAGE.

HELIOTHERAPY IN SURGICAL TUBERCULOSIS.

To the Editor of THE LANCET.

SIR,—In THE LANCET of July 11th there appears an annotation on this subject. In it the writer remarks that "in this country a beginning of this method of treatment has scarcely been made."

Heliotherapeutic measures have, however, been employed at the Alton Cripples' Hospital almost since it was opened in 1908, and have always been regarded as an important adjuvant to the more generally recognised methods of conservative treatment of surgical tuberculosis. With increasing

experience the value of insolation has become more thoroughly appreciated, and on any sunny weekday a couple of hundred children may at any time be seen receiving carefully graduated treatment in the sunlight. Heliotherapy is undoubtedly of great value in treatment, but its application must be gradually undertaken and requires considerable care. No material benefit appears to be received until pigmentation has been established, and it is interesting to note that in certain patients pigmentation cannot be obtained. Some cases of a pronounced cachectic type resist exposure and will not pigment. In these there is usually abundant evidence of marked tuberculous toxæmia.

Exposure of these patients to sunlight, either natural or artificial, has no beneficial effect whatever, and, indeed, may cause the patient considerable discomfort unless most carefully regulated. In some of these the power to pigment is subsequently acquired, and this pigmentary capacity is not infrequently synchronous with abscess formation and enhanced if the abscess formed is treated by aspiration with or without the injection of modifying fluids. Progress towards recovery is then usually hastened and the complete absorption of the abscess facilitated.

Red-haired patients frequently present great difficulties in treatment. In these the skin reddens and blisters unless great care be taken, and freckles are abundantly deposited, but the desired bronzing is exceedingly difficult to obtain. In the majority of cases, however, pigmentation is produced with comparative ease, and coincident with its establishment there is marked improvement. In no cases of tuberculous arthritis is the improvement more striking than where sepsis complicates the condition, and sinuses, which appear to resist all other methods of treatment, sometimes dry up with remarkable rapidity, leaving supple, non-keloidal, and less unsightly scars. The value of pure, dry air in assisting to obtain these results has, in my opinion, hardly been sufficiently recognised. The functional results which follow insolation of tuberculous joints are often extremely satisfactory, and cases of tuberculous peritonitis and adenitis often derive very considerable benefit. On cloudy days, at Alton, heliotherapeutic treatment is continued artificially with what appears to be the happiest results.

Heliotherapy is an adjuvant to treatment, and as an aid to treatment is of the greatest value, but the indications for its employment and its limitations should be very clearly recognised. It should not displace but should supplement those other well-recognised and valuable methods of treatment summed up by the term "conservative" to which, indeed, it forms an addition of the highest value.

I am, Sir, yours faithfully,

Harley-street, W., July 11th, 1914. H. J. GAUVAIN.

LOCAL ANÆSTHESIA.

To the Editor of THE LANCET.

SIR,—I must thank your reviewer for drawing attention to an overlooked misprint of a somewhat serious nature in my translation of Dr. Arthur Schlesinger's book on "Local Anæsthesia" in THE LANCET of July 11th. Dr. Schlesinger does not, of course, state that inflammatory processes heighten *insensibility* but the direct reverse—that they heighten sensibility. The statement as it appears in my text is so obviously contrary to experience that most readers will, I fancy, suspect a misprint or a *lapsus calami*.

As regards the other misprint to which your reviewer calls attention, that of supra- for infra-orbital (not the reverse as your reviewer states), it occurs in the original German. I must, however, plead guilty to having overlooked and failed to correct an obvious slip.

I am, Sir, yours faithfully,

Bovingdon, Herts, July 10th, 1914. F. S. ARNOLD.

*** Dr. Arnold is good natured in his willingness to accept responsibility, as translator, for a slip in the original.—ED. L.

THE NATIONAL INSURANCE ACT.

A STATE INSURANCE BILL.

THE Bill introduced in the House of Commons by Sir Richard Cooper, M.P., for which Lord Willoughby de Broke undertakes the responsibility in the House of Lords, has for its main object the institution of voluntary State-aided insurance as a substitute for compulsory insurance. It appears to be somewhat late in the day so far as securing support from the approval of the Friendly Societies is concerned unless the president of the National Conference of Industrial Approved Societies spoke without authority at the meeting held on July 3rd at Staple Inn. He spoke of a scheme of voluntary national insurance as impracticable and impossible in the present circumstances, and said—

> Although many of the leaders of the great Friendly Societies were strongly opposed to the introduction of a compulsory scheme of National Insurance, and cherished with great affection, and rightly so, the voluntary principle on which their societies were based, they have with one accord during the past few weeks denounced the substitution of a voluntary basis for the compulsory basis of the National Insurance Act, not only as impossible, but as unthinkable.
>
> I have said that the voluntary proposition is dead; but I think I may without exaggeration go a step further and say that it is in that yet more parlous condition attributed by a late Conservative statesman to a certain well-known and much-discussed economic doctrine.

There are many others besides Friendly Society officials who have viewed the National Insurance Act in the past with considerable hostility, but are now working hard to make it useful to the nation, and it is doubtful whether any substantial number of these would be in favour of a voluntary system as preferable for the promotion of the national health and well-being. To medical practitioners the clauses of the Bill relating to the administration of benefits by Friendly Societies and trades unions will be of interest, but it will be some time before any such measure introduced by a private Member will be sufficiently within the scope of practical politics for its provisions to demand criticism in detail.

THE PANEL MEDICO-POLITICAL UNION.

A few weeks ago a meeting, to which a selected number of practitioners on the London panel were invited, was held in one of the rooms at the Queen's Hall for the purpose of forming a medico-political organisation for practitioners undertaking the treatment of insured persons. The meeting referred to an executive committee of 12 members (six representing the north side and six the south side of the Thames) the framing of a constitution and rules, and these were submitted to an assembly of 80 practitioners at the Caxton Hall on July 10th. Before this stage was reached, however, the committee summoned a protest meeting of London panel practitioners to consider the attitude of the

London Insurance Committee in the matter of the unallotted funds. The meeting, said to have been attended by 500 practitioners, passed a resolution calling upon the Insurance Committee to distribute; it also appointed a deputation to wait upon the Commissioners and the Government. The reason why only a section of the panel practitioners were invited to the first meeting is said to be that the funds were not sufficient to enable a circular to be widely distributed. The promoters seem to have overlooked the possibility of calling the attention of the profession to their proposals through the medium of the medical press; THE LANCET, at any rate, has received no official intimation of the various proceedings here related. On July 10th it was decided to call the new organisation the "Panel Medico-Political Union" and to conduct it on trade union principles. Although some doubt appeared to exist in the minds of many of those present, discussion elicited the information that the organisation is not limited to London but is intended to cover the whole country. In view of its basis of election, as representing only the London area, the executive committee undertook to submit itself for re-election at an early date. The subscription was fixed at one guinea a year, membership to be restricted to practitioners on the panel.

CENTRES FOR THE COÖPERATION OF PANEL PRACTITIONERS.

The London Panel Committee has given further consideration to the Budget proposals, especially in regard to the grants to be given towards the establishment of centres for the coöperation of practitioners on the panel. The possibilities of the grants being given to hospitals to encourage them to establish smaller institutions in various localities, or, alternatively, of being allotted to groups of panel practitioners, were discussed, and the committee expressed the view that the centres should provide consulting-rooms for a number of practitioners and accommodation for a trained nurse, an X ray operator, and a clerk; that arrangements should be made for the occasional attendance of consultants; and that the centres should be under the joint control of the Insurance and Panel Committees. The committee decided to wait upon the Insurance Commissioners and the Government to discuss the delay on the part of the London Insurance Committee in distributing the funds accumulated during 1913 in respect of insured persons who have not chosen a doctor. The delicate questions that arise in connexion with decisions as to what is or is not extravagant prescribing has led the Pharmacy Subcommittee to express regret that the question of the remuneration of the practitioner is bound up with the cost of the drugs and appliances he orders for his patient. The subcommittee has come to the conclusion that there is much to be said for a variation in the financial arrangements whereby the practitioners' fund and the drug fund are quite independent. The efforts of the Panel Committee would then be directed towards checking extravagant prescribing, not so much that the remuneration of the practitioner should be increased, but in order that the drug fund might be used to secure the greatest benefit to insured persons.

SHEFFIELD INSURANCE COMMITTEE.

At a recent meeting of the Sheffield Insurance Committee dissatisfaction was expressed at the manner in which, it was alleged, certificates were signed by medical men on the panel for the purpose of patients obtaining sickness benefit. The chairman of the Medical Benefit Subcommittee added to this a complaint as to the illegibility of the certificates given, but the principal allegation was to the effect that certificates were frequently signed bearing the words "I have this day examined," when in fact the patient had not been seen by the medical man on that day or even recently. It was pointed out by medical practitioners upon the committee that to give such certificates did not necessarily involve any culpable intention upon the part of a medical practitioner, but it was evidently felt by many present that the practice was prevalent and should be put a stop to. In comment it may be observed that medical practitioners are bound by the Regulations if they undertake to accept service under the National Insurance Act, and that there is no obligation whatever upon them to act otherwise than in accordance with the letter of those Regulations. The infringement of a Regulation may appear to be justified by the apparent interest of a patient, but if Regulations are irksome it is for the patients who suffer from them to protest and to try to get them altered. It is for their benefit that the Act was passed, they contribute to its finances, and they can make their wishes felt through their societies and through the exercise of the parliamentary vote.

BRISTOL INSURANCE COMMITTEE.

At the last meeting of this committee a resolution was carried in favour of the establishment of medical referees, who shall also act as advisers to the Insurance Committees, a service of trained nurses, facilities for modern methods of diagnosis, and provision for further medical and surgical appliances.

DERBYSHIRE INSURANCE COMMITTEE AND TUBERCULIN TREATMENT.

At a meeting of the Derbyshire Insurance Committee Mr. J. Court expressed his intention of making public the result of inquiries made by him at dispensaries at which the tuberculin treatment was being administered, in order that the expense of the treatment in relation to the benefit derived from it might be seriously considered. Dr. S. Barwise raised a protest on the ground that as medical adviser to the committee he had not been asked to report on the subject, and pointed out that the institutions referred to were not intended for the purpose of tuberculin treatment. Dr. A. Boswell and the chairman of the Sanatorium Subcommittee also urged that the work being done was still in an experimental stage, that progress was being made, and that criticism was premature. Mr. Court, who assured the committee of his intention to make public the result of his investigations, was invited to print it and present it at a future meeting. At the same meeting of the committee a motion was carried declining to support a movement for the appointment of medical referees to be paid by the State. The question was raised by a letter which had been received from the Kent Insurance Committee asking for such support.

SURPLUS FUNDS AT EDINBURGH.

At a meeting of the Insurance Committee of the burgh of Edinburgh it was resolved after discussion that there should be equal distribution of the funds arising from unallotted insured persons among the medical men on the panel. In the course of the discussion of another proposal, which was negatived, that the money should be allocated in inverse ratio to the number of insured persons on the various lists, a councillor who opposed said that it would give an inducement to medical men to go on the panel and to restrict the number of their patients, knowing that they would so get a handsome sum from the yearly distribution of moneys accumulated. This argument seems to be based upon a misconception, apart from any question of the merits of the scheme against which it was advanced. The large sums which have hitherto been accumulated from the cause indicated have been due to the difficulties arising out of the administration of the Act in its early days. There should never be any such large accumulations again. Now that the Act is everywhere in fair working order, it will be the duty of Insurance Committees to see that newly insured persons either select their medical attendants or are promptly allotted to suitable practitioners. This duty is cast upon the committees by statute, and the Commissioners are sure to see that they perform it.

Medical News.

UNIVERSITY OF OXFORD.—The following medical degrees have been conferred :—

D.M.—G. H. Hunt, Christ Church.
B.M.—A. C. Ballance, A. B. Thompson, T. C. Davies, C. W. B. Littlejohn, and G. P. Selby, New College; and E. H. Mather, Exeter.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS OF LONDON AND SURGEONS OF ENGLAND.—At the Second Professional Examination in Anatomy and Physiology held on July 2nd, 3rd, 6th, and 8th, 83 candidates presented themselves, of whom 49 were approved and 34 were rejected. The following candidates were approved :—

Eawy Ahmed, London Hospital; Douglas Harris Anthony, St. Mary's Hospital; Philip Ardern Ashcroft, Manchester University; Robert Aspinall-Stivala, Guy's Hospital; Youssef Aziz, Cairo Medical School; Percy Banbury, St. Thomas's Hospital; Noel Arthur Hamilton Barlow, Guy's Hospital; Maurice Charles Breese, King's College and St. Mary's Hospital; John Leycester Dudley Buxton, University College; Henry Hutton Castle, St. Thomas's Hospital; Edwin Alfred Clegg, Middlesex Hospital; Antonio Mario Clement, St. Thomas's Hospital; Geoffrey Francis Cobb, St. Bartholomew's Hospital; Cyril John Chesterfield Cooke, University College; Jean Crétin, St. Bartholomew's Hospital; Cyril Lister Curie, Guy's Hospital; Albert Victor Spurgeon Davies, St. Mary's Hospital; Alfred Beresford Dummere, London Hospital; Spencer Graeme Dunn, St. Bartholomew's Hospital; Frederick Oloff Fehrsen, Philip Edward Francis Frossard, and Aziz Girgis, London Hospital; Constance Hart, M.D. Pennsylvania, London School of Medicine for Women; John Anderson Hill, London Hospital; George Hoffmeister, Middlesex Hospital; Frederick Hunter Hyland, Leeds University; Luis Gregorio Chacin Itriago, M.D. Venezuela, Venezuela University and King's College; Mohammed Kamil, King's College; George Spencer Lajus Kemp, Sheffield University; George Edwin Kidman and Kenneth Fergus McAlpin, Guy's Hospital; Maurice William Holt Miles, St. Thomas's Hospital; Joseph Octave Roger Montocchio, Guy's Hospital; Richard Moser, St. Bartholomew's Hospital; William Watson Newton, Birmingham University; Arthur Leslie Packham, L.D.S. Eng., Middlesex Hospital; John Alexander Percival Perera, Ceylon and London Hospital; Arthur Rose-Innes, University College; Ahmad Hussein Samy, St. Bartholomew's Hospital; John Andrew Adamson Prinski Scott and Nirendra Mohan Sen-Gupta, London Hospital; John Percy Reginald Tennekoon, Ceylon Medical College; Ismail Towfik, Cairo Medical School and Guy's Hospital; Kenneth Robert Traill and Walter Aslatt Turner, Guy's Hospital; Percy Ward, Sheffield University; William Harold White, St. Thomas's Hospital; James Harry Wiseman, Sheffield University; and Alfred Frank Wyatt, London Hospital.

At the quarterly examination in Practical Pharmacy held on July 9th the following candidates were approved :—

Edward Beric Alabaster, Birmingham University; Hussein Amin, Cairo and St. Bartholomew's Hospital; George Kilpatrick Arthur, St. Bartholomew's Hospital; Errington Atkinson, London Hospital; Edgar Richard Batho, St. Mary's Hospital; Joseph Herbert Bailey, London Hospital; Alan Gabriel Bodman, Bristol University; Martin Vincent Boucaud, St. Bartholomew's Hospital; Charles Reginald Cade, Guy's Hospital; Percival Cheal, London Hospital; George Edwin Chissell, Middlesex Hospital; Percival Charles Collyns, St. Bartholomew's Hospital; Allen Robert Crane, London Hospital; Thomas Henry Ronald Davies, University College, Cardiff; Lionel Basil Anjou de Kretser and Edmund Rupert Dermer, Middlesex Hospital; Mohamed Ahmed El Dardiri, St. Bartholomew's and King's College Hospitals; Ahmed Mostafa El-Mishad, Cairo and Charing Cross Hospital; Abdel Hamid El Rakshi, Cairo and St. Bartholomew's Hospital; Tyrrell George Evans, St. Bartholomew's Hospital; Moustafa Fahmy, Cairo and London Hospital; Alfred Foster, St. Bartholomew's Hospital; Abdallah Abd el Rahman Galak, Middlesex Hospital; Edward Francis Gillett, St. Mary's Hospital; Frank Eric Harger, St. Bartholomew's Hospital; Austin George Hewer, Middlesex Hospital; Charles Ewart Hopwood, Manchester University; Eric Llewelyn Ivens, London Hospital; William Anthony Jolliffe, St. Bartholomew's Hospital; Francis Claud Lapage and Guy Neville Lomax, Middlesex Hospital; Albert Victor Lopes, St. Bartholomew's Hospital; James McDonnell, London Hospital; Bagenal Harvey Mellon, F.R.C.V.S., National University, Dublin; Thomas Sidney Nelson, Oxford University and St. George's Hospital; Thomas Owen, St. Bartholomew's Hospital; Christopher Stanley Parker, Charing Cross and King's College Hospitals; Frank Young Pearson, University College, Cardiff; David John Platts, King's College Hospital; John Wootton Rammell and Charles Reginald Reckitt, London Hospital; John Harris Ekin Sandford, St. Bartholomew's Hospital; John Milnes Smith, Middlesex Hospital; John Masfen Stack, Birmingham University; Frederick Reginald Sturridge, Middlesex Hospital; Clement Price Thomas, University College, Cardiff; Harry Mortimer Wharry, Oxford University and St. Bartholomew's Hospital; Robert Harvey Williams, St. Bartholomew's Hospital; and Shebsell Yahilevitz, London Hospital.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—At a meeting of Council of the Royal College of Surgeons of England on July 9th diplomas of Member were conferred upon the following two candidates who have now complied with the necessary by-laws :—

John Robert Mitchell Collie, M.D., C.M. Dalhousie, Dalhousie University and University College Hospital; and Refna Mallet, Royal Free Hospital.

VICTORIA UNIVERSITY OF MANCHESTER.—At examinations held recently the following candidates were successful :—

Diploma in Public Health.—R. B. Berry, G. D. Dawson, James Ferguson, H. M. Fleming, W. M. MacIlraith, James Ramsbottom, E. A. Ramsden, G. K. Thompson, J. A. Tomb, and A. E. Townley.
Diploma in Psychological Medicine.—R. M. Stewart.

UNIVERSITY OF LEEDS.—The degrees of M.B. and Ch.B. have been conferred on the following :—

J. C. Gillies; H. R. Knowles, W. H. Lonen, H. Shochet (with second-class honours), and C. Wilson (with second-class honours).

The following pass-lists have been posted :—

SECOND M.B., CH.B. EXAMINATION.

Part I., Anatomy and Physiology.—E. W. Drury, E. E. V. Glover, K. Jaidka, and I. Silverstein.
Part II., Pharmacy.—Z. P. Fernandez, F. H. Goss, H. V. Horsfall, C. R. Knowles, and A. L. Telling.

FINAL M.B., CH.B. EXAMINATION.

Part I., Pathology and Bacteriology.—J. J. Digges La Touche-H. Hyman, W. L. Ingham, C. Leake, J. Rosencwige-R. S. Topham, and A. Umanski.
Part II., Forensic Medicine and Public Health.—W. D. Anderton, S. N. Cohen, C. M. Gozney, A. S. Hebblethwaite, H. R. Knowles, H. S. Lockwood, H. W. Whitteron, H. Shochet, J. Wilkinson, and C. Wilson.

L.D.S. EXAMINATION.

First Professional Examination.—A. L. Fraser.
Final Examination (Part I.).—D. B. Clubb and E. A. Rogerson.

The Diploma in Dentistry has been conferred upon J. E. Gill.

UNIVERSITY OF ABERDEEN.—At the graduation ceremony on July 8th the following awards were made :—

Degree of Doctor of Medicine (M.D.).—Alexander Greig Anderson, William James Reid, James Robertson Murray, Alexander Wilson, Douglas Craig, William Brooks Keith, Andrew Mackenzie Ross Sinclair, and Francis Wilson Stuart.
Degrees of Bachelor of Medicine (M.B.) and Bachelor of Surgery (Ch.B.).—Neil Cantlie (second class honours), Alexander George Craib, Fergus Macandrew Davidson, John Dow, David Fettes, John Foubister, Rudolf William Galloway, Andrew Moir Gray, Wilfred Francis Hawkins, Alfred James Ireland, George Robertson Lipp (second class honours), Evan Alexander Mackenzie, David Murdoch Marr, James Morrison, John Forbes William Sandison, Ernest Tawse, Walter Bailey Thomson, William Walker, William Robert Watt, and James Mitchell Whyte.
Diploma in Public Health.—Winnifred Margaret Gray and James Henderson Yule.

The Straits Settlements Gold Medal (for best thesis on a subject dealing with tropical medicine) was awarded to Dr. Alexander Frank Wallace. The John Murray Medal and Scholarship (to the most distinguished graduate (M.B.) of 1914) was awarded to Dr. Alexander Elmslie Campbell.

QUEEN'S UNIVERSITY OF BELFAST: FACULTY OF MEDICINE.—At examinations held recently the following candidates were successful :—

FIRST MEDICAL EXAMINATION.

Chemistry and Physics.—Herbert Abernethy, Fredk. C. S. Bradbury, Frederick Campbell, Alfred E. Gallagher, John Grimson, William Hoey, George D. F. M'Fadden, Finlay S. Mayne, Thomas Montgomery, and Albert V. Morrison.
Physics.—Stanley E. Clarke, John W. C. Colquhoun, Alfred J. May, and John D. Pinkerton.
Zoology and Botany.—Herbert Abernethy, Samuel Acheson, John Black, Winnifred W. Boland, Frederick C. S. Bradbury, Samuel F. Breakey, James H. Calvert, Helen M. Calwell, Frederick Campbell, Thomas G. Campbell, Thomas I. Candy, John Caruth, Gladys E. Chambers, Brice R. Clarke, Joseph M. Clearkin, Thomas Dickey, Patrick J. Doherty, Samuel E. Duff, Stewart Fullerton, Alfred E. Gallaher, Samuel Hall, Arthur Henry, William Hoey, Mary E. Irwin, Michael G. Kierans, Albert E. Keown, Elizabeth A. K. Law, David Loughridge, Gilbert L. Love, William J. Lytle, Geo. D. F. M'Fadden, John M'Garvey, Daniel J. M'Gurk, Daniel M'Lister, Robert J. M'Neill, Henry F. Macauley, Edward A. Maguire, John A. Martin, Finlay S. Mayne, Mary M. Merrick, William Michael, Thomas Montgomery, Albert V. Morrison, Samuel Owens, Hugh Paul, Henry Poston, Richard B. Quinn, W. W. Rentoul, David A. E. Scott, Louis P. St. J. Story, Percival S. Walker, and Andrew Watson.
Chemistry.—David Cromie and Patrick J. Doherty.
Zoology.—James Craig and David Cromie.
Botany.—J. C. Carron.

SECOND MEDICAL EXAMINATION.

Anatomy and Physiology.—Joseph Adams, Samuel T. Alexander David D. Anderson, Olive M. Anderson, Charles Barton, Annie E. E. Beattie, James Boyd, Gerard J. Crawford, Marion Crawford, William Cupples, John H. Davison.

Dorothy I. Dobbin, Frederick Hopkins, John Lascelles, Daniel J. Loughran, John C. Loughridge, Robert N. B. McCord, Joseph McCormick, William C. McKee, Jeremiah O'Kane, Charles A. W. Ramsay, John E. Rea, Martin H. Turnbull Norman C. L. B. Tweedie, Thomas Wallace, and Cecil J. A. Woodside.

Physiology.—Olga R. I. Love and Peter Macarthur.

THIRD MEDICAL EXAMINATION.

Pathology and Materia Medica.—William L. Agnew, Eileen M. Bell, William Bryars, George Chesney, Alfred U. Dickey, Grace M. English, Mary E. Henry, Mary M. Keirns, Arabella C. Kirker, Arthur L. M'Creary (Pathology only), Nathaniel M'Cullough, Joseph P. M'Ginley, Bernard W M'Kinney, Michael M'Menamin, James C M'Millan, Hugh F. M'Nally, Frederick M'Sorley, Patrick J. M'Sorley, John J. Marner, David Mitchell, Frank P. Montgomery, Elizabeth M. Moore, Margaret S. Purce, William Saunderson, Robert L. Sinclair, Dennis K. Watterson, Donald R. Wheeler, Charles A. Whitfield, and Frederick H. Whyte.

Medical Jurisprudence and Hygiene.—William L. Agnew, George V. Allen, William Bryars, Alfred G. Campbell, George Chesney, Alfred C. Dickey, Samuel J. W. Donald, Grace M. English, Francis Ewart, Mary E. Henry, Louis Jefferson, Mary M. Keirns, Arabella C. Kirker, John M. M'Cormack, Nathaniel M'Cullough, Joseph P. M'Ginley, Bernard W. M'Kinney, Michael M'Menamin, James C. M'Millan, David Mitchell, Elizabeth M. Moore, William Napier, Margaret S. Purce, Robert J. Rea, John Scott, Robert J. Sinclair, Thomas R. S. Thompson, Donald R. Wheeler, Charles A. Whitfield, Frederick H. Whyte, John Wilson (Old Regulations), and James J. Thompson.

At the examination for M.B., B.Ch., and B.A.O. degrees, the following were successful :—

Robert M. Beath (First Class), Herbert T. Chatfield, William M'M Chesney, John Duffin, Edward C. T. Emerson (Second Class), Archibald Fullerton (Second Class), David Gaston, Margaret Gorman, Thomas Grimson, William S. B. Hay (Second Class), Joseph F. D. Hunter, David Jamison, William J. Lascelles, Beattie Lyons, Campbell M'N. M'Cormack, Robert N. M'Kinstry, Edward U. MacWilliam, Edward A. Mallon, Edward B. C. Mayrs (Second Class), Sinclair Miller (Second Class), James J. Murray, Samuel B. Picken, George R. B. Purce (Second Class), George W. Rea, Elizabeth M. Robb, John S. Savage, Albert F. L. Shields, James Tate, John Warwick, Owen Wilson, William R. E. Wilson, and Peter P. Wright.

The following degrees and diplomas have been conferred :—

M.D.—By Thesis: David Finnegan, Philip Jacob Gaffkin, David M'Cay (gold medal), Samuel M'Clure, William Samuel J. Shaw, and John M'Geagh Williams. By Examination: Bruce A. West (with commendation).

M.Ch.—By Examination: T. S. S. Holmes (gold medal). By Thesis: Frederick Crooks.

Diploma in Public Health.—Marion B. Andrews, Norman C. Graham, William S. Haydock, William J. F. Mayne, and Samuel P. Rea.

TRINITY COLLEGE, DUBLIN: SCHOOL OF PHYSIC.—At examinations held recently the following candidates were successful :—

PRELIMINARY SCIENTIFIC MEDICAL EXAMINATION.

Chemistry and Physics.—A. G. Bewley, R. P. Hemphill, T. M. Bentley, F. Gill, R. M. D. Devereux, P. C. Parr, L. Albertyn, J. F. Stewart, E. E. Rollins, J. W. Scharff, J. Posner, E. B. Edge, W. F. McConnell, J. M. Semple, E. F. Wilson, T. H. R. McKiernan, J. M. Hill, J. R. B. Levis, J. A. Acheson, T. S. McDonald, D. McElwee, J. C. Fouche, J. N. H. Murphy, T. B. H. Tabuteau, J. C. Campbell-Henry, P. C. Cowan, N. Gray, and S. W. Russell.

Botany and Zoology.—R. P. Hemphill, L. Albertyn, J. A. Acheson, R. G. Lewis, E. F. Wilson, Gertrude Rice, W. B. Briggs, S. A. Clark, W. L. Lloyd, W. L. Young, G. H. Davis, J. W. Scharff, S. W. Russell, E. B. Edge, A. H. Thompson, C. W. Parr, H. A Lavelle, R. M. D. Devereux, W. F. McConnell, J. E. McCormick J. H. Coolican, T. Madill, J. F. Stewart, E. F. W. Smith, H. Birney, E. S. E. Mack, E. E. Rollins, I. W. Beatty, A. Blagoff, T. R. Warren, R. N. Nunn, H. J. Wright, G. C. Robb, W. Sweetnam, C. D. Shortt, P. Casey, F. W. Godbey, W. A. Shannon, S. J. Laverty, G. R. G. Smyth, and J. D. Watson.

Botany.—J. M. Hill.

INTERMEDIATE MEDICAL EXAMINATION.

Part I.—B. D. McCrea, W. R. Fearon, B. A. McSwiney, A. R. Barlas, A. L. Gregg, R. N. Murray, J. R. Duggan, W. P. Elford, W. H. Flinn, S. C. Mitchell, J. J. Beasley, W. P. Lubbe, F. J. Smith, C. P. Chambers, G. W. B. Shaw, P. S. Snell, W. J. McClintock, R. W. Nesbitt, C. L. McDoncgh, A. H. Davidson, F. C. Tucker, M. C. Dippenaar, H. H. Molloy, F. G. Heuston, and J. McClelland.

Part II.—T. J. Lane, S. V. Furlong, S. R. Hill, J. P. Macnamara, E. Parker, F. J. Murphy, J. T. Westby, F. M. Ferguson, F. A. McHugh, B. A. Merrin, J. J. Keatley, R. Gordon, and G. L. Murphy.

FINAL MEDICAL EXAMINATION.

Part I.—H. Daniel, E. D. T. Hayes, J. W. Bigger, R. W. Shegog, G. Joughin, Violet M. Deale, G. O. F. Alley, D. S. Martin, H. Mitchell, W. F. Wilson, A. F. Grimbly, T. Stanton, A. J. Horne, E. J. Hamilton, R. W. Acheson, D. H. Hall, A. L. Wilson, and W. J. Dowling. *Materia Medica and Medical Jurisprudence.*—F. W. O'Connor and T. G. Roche. *Pathology.*—W. B. Walker

Part II.—*Medicine.*—J. N. Armstrong, P. W. McKeag, G. H. Wood, F. J. O. King, T. D. Power, H. C. D. Miller, J. C. A. Dowse, C. D. M. Buckley, W. A. Ryan, Dorothy E. Webb, F. A. Roddy, H. R. Ford, T. A. Lawder, W. H. Elliott, W. O. Tobias, Amy F. Nash, J. S. Dockrill, and J. H. Fletcher. *Surgery.*—J. C. A. Dowse, E. E. Lavy, J. C. Ogilvie, J. P. Quinn, T. W. Allen, E. Evans, F. S. Mitchell, C. D. M. Buckley, R. I. Sullivan, A. G. Varian, W. R. L. Waters, J. H. Fletcher, G. H. Wood, F. R. Dougan, N. H. H. Haskins, B. C. O. Sheridan, W. O. Tobias, F. J. O. King, J. N. Armstrong, H. R. Ford, R. A. Anderson, and W. M. Snodgrass. *Midwifery.*—N. M. Boyce, W. E. Tyndall, R. R. G. Atkins, J. S. Robinson, E. Robinson, F. Harris, J. V. Cope, H. S. Collins, Clara B. M. Adderley, W. B. Cathcart, and W. M. Snodgrass.

DENTAL EXAMINATIONS.

Preliminary Scientific.—Chemistry and Physics.—H. E. Flavelle and J. H. J. Stuart. *Chemistry.*—L. Wigoder. *Dental Anatomy.*—H. E. Flavelle.

Intermediate.—M. L. Counihan and C. H. Herbert.

DIPLOMA IN PUBLIC HEALTH.

Part I.—J. R. D. Holtby, E. O'Connor, A. V. J. Richardson, H. T. S McClintock, and K. L. Kapur.

Part II.—A. V. J. Richardson, G. H. Culverwell, K. L. Kapur, R. H. C. Lyons, E. O'Connor, and H. T. S. McClintock.

CONVERSAZIONE AT THE ROYAL COLLEGE OF PHYSICIANS OF LONDON.—In connexion with the final meeting of the organising committee of the Seventeenth International Congress of Medicine, held in London last year, a reception was given at the Royal College of Physicians of London on July 7th, when the guests were received by Sir Thomas and Lady Barlow. There was a large attendance. A fine display of books, including early editions, and manuscripts of Harvey and Sydenham, was arranged by Dr. Norman Moore, the Harveian librarian, an interesting collection of plate in the possession of the College was shown, and a loan collection of water-colours, etchings, and drawings was exhibited. In the evening Mr. Stephen Paget showed some kinematograph films illustrating the life of micro-organisms.

ROYAL DENTAL HOSPITAL OF LONDON: SCHOOL OF DENTAL SURGERY.—A series of post-graduate lectures will be given as follows during the months of October and November, 1914, on Tuesdays, at 6 P.M. Oct. 13th: Recent Researches in Dental Histology, by Mr. J. H. Mummery. Oct. 20th: Advantages and Disadvantages of Inserting Dentures immediately after the Multiple Extraction of Teeth, by Mr. H. Lloyd Williams. Oct. 27th: Ultimate Results of the Immediate Regulation of Misplaced Teeth, by Mr. W. H. Dolamore. Nov. 3rd: Gum Facings, by Mr. D. P. Gabell. Nov. 10th: Some Uses of Casting, by Mr. W. W. James. Nov. 17th: The Extraction of Teeth, by Mr. A. L. Whitehouse. The fee for the course is £2 2*s.*, but past and present students of the hospital and internal students of the University of London will be admitted free.

ROYAL MEDICAL BENEVOLENT FUND.—At the last meeting of the committee 24 cases were considered and grants amounting to £185 voted to 22 of the applicants. The following is a summary of the cases relieved :—

M.R.C.S., L.R.C.P., aged 47, who practised at Aysgarth, Yorks, and abroad. After residence abroad health broke down and had to return to England, thoroughly incapacitated and still unable to work. Voted £10 in two instalments.—Widow, aged 65, of L.S.A. Lond. who practised at Ipswich. Five children; three married but unable to help. Only income £8 per annum from life assurance and 19*s.* per week from lodgers. Health not good. Relieved 12 times, £130. Voted £10 in ten instalments.—Daughters, aged 48 and 56, of M.D. Aberd. who practised at Luddenden, Yorks. The eldest is suffering from incurable deafness and the younger one has very indifferent health. Only income £20 each per annum from investment. Relieved once, £10. Voted £10.—Widow, aged 58, of L.R.C.P. & S. Edin. who practised at Balham and died in 1913. Invested small capital in furnishing house to receive paying guests, but has lost money. Voted £12 in 12 instalments.—Widow, aged 39, of L.R.C.P. & S. Irel. who practised in Monmouthshire and New South Wales. Engaged as housekeeper at £15 12*s.* per year, and one of two daughters, aged 10 years, is allowed to live with her. The other child adopted by husband's relatives. Asks for assistance towards the education of daughter. Voted £2 and referred to the Guild.—Widow, aged 64, of M.R.C.S. Eng. who practised in Birmingham, Brighton, and Australia. Lost all capital in consequence of husband's long illness 11 years ago. Only settled income £10 per annum, and too old to obtain work. Voted £12 in 12 instalments.—Widow, aged 53, of L.R.C.P. & S. Edin. who practised at Great Yarmouth. One daughter, who used to dispense for her father, but now helps her mother and does other work. Invested capital in boarding house which has not paid. Voted £12 in 12 instalments.—Widow, aged 46, of L.S.A. Lond. who practised at Leyton. Five daughters, eldest 16 years. No provision made for the widow, and her only income is a small allowance made by her brothers. Voted £2 and referred to the Guild.—M.B. of Aberdeen, aged 55, who practised at Bunbury and in Essex. Suffering from paralysis and quite unable to work. Wife and four daughters, two of whom are at school. Only income £76 per annum from investments and small pension. Voted £5 and referred to the Guild.—Widow, aged 32, of M.R.C.S. Eng. who practised at Kevingham, near Hull. Three children, the eldest 9 years. Only income £12 per annum. Voted £10 in two instalments.—Daughter, aged 43, of L.R.C.P. & S. Edin. who practised at Basdon and Whitley Bay. Obtains a small income by nursing, but has been unable to work for 11 weeks owing to sciatica. Relieved nine times, £60. Voted £5.—Daughter, aged 62, of M.R.C.S. Eng. who practised at Lydney. Means lost through a defaulting trustee, and too old to work. Only income an annuity of £21 from another charity. Relieved seven times, £77. Voted £5.—Widow, aged 56, of M.R.C.S. Eng. who practised at Enfield. Two daughters, one married and the other an invalid. Income only £60 per annum,

and not well enough to work. Relieved three times, £15. Voted £5.—Widow, aged 49, of L.S.A. Lond. who practised at Leicester. Earns a little by needlework, but cannot obtain sufficient work. Two daughters, each only earning a little, and two boys, ages 12 and 10, at school. Relieved twice, £22. Voted £12 in 12 instalments. —Widow, aged 55, of L.R.C.P. & S. Glasg. who practised at Heaton-on-Tyne. Six children, two of whom are married and unable to assist, and the others only very little. Has two lodgers. Health very unsatisfactory. Relieved ten times, £106. Voted £12 in 12 instalments.—Daughter, aged 50, of M.R.C.S. Eng. who practised at Box. Lives with delicate sister, who also receives a grant from the Fund. Applicant's health very unsatisfactory. Relieved twice, £24. Voted £12 in 12 instalments.—Widow, aged 68, of M.D. Edin. and M.R.C.S. Eng. who practised at Cambridge. Income £25 per annum from friends and occasionally has a boarder. Relieved four times, £24. Voted £12 in 12 instalments.—Widow, aged 56, of M.R.C.S. Eng. who practised at Wellingborough. No income of own, but acted for a time as housekeeper for relative who gave home and board in return. The home has now been given up, so is stranded. Relieved three times, £32. Voted £12 in 12 instalments.—Widow, aged 34, of M.R.C.S. Eng. who practised at Bow, E. Endeavours to make a living by taking in boarders, but not very successfully, and is in arrears with rent. Has twin boys aged 7½ years. Relieved once, £10. Voted £10.—Special emergency grants of £5 each were also made to two cases, these to be given at the discretion of the honorary secretary for cases.

Contributions may be sent to the honorary treasurer, Dr. Samuel West, 11, Chandos-street, Cavendish-square, London, W.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

Infant Mortality in Lancashire.

THERE has been presented to Parliament a report dealing with infant mortality in Lancashire. It has been prepared by the medical officer of the Local Government Board and by Dr. COPEMAN, Dr. MANBY, Dr. FARRAR, and Miss LANE-CLAYPON, M.D.

St. George's Hospital Act.

The Royal assent has been given to the St. George's Hospital Act, which has passed both Houses of Parliament during the present session.

The Midwives (Scotland) Bill.

The Midwives (Scotland) Bill has been read a second time in the House of Commons and sent to a Standing Committee.

Experiments on Living Animals.

On the motion of Mr. ELLIS GRIFFITH the House of Commons has ordered a return showing the number of experiments on living animals during the year 1913, under licences granted under the Act 39 and 40 Vict., c. 77, distinguishing the nature of the experiments.

The Milk and Dairies Bill.

The Standing Committee of the House of Commons which has been considering the Milk and Dairies Bill has concluded its examination of that measure and has ordered it to be reported with amendments to the House.

Forcible Feeding.

A deputation from the Forcible Feeding Protest Committee, consisting of Dr. J. MCINTOSH, Dr. HADEN GUEST, Sir VICTOR HORSLEY, Mr. C. MANSELL MOULLIN, Dr. FRANK MOXON, and Dr. H. SCHÜTZE, waited upon the Home Secretary on July 15th. Mr. MCKENNA intimated that on the ground of the undesirability of the publication of prisoners' names reporters would not be admitted. Neither would he permit the deputation's own shorthand writer to be present, but mentioned that he had an official reporter in attendance. The deputation replied that it could not accept this position, and remarked that the names of the prisoners had already been widely published. The position of the deputation was one of grave public responsibility, and they demanded to be heard in the presence of the press. The deputation then withdrew, and from the Westminster Palace Hotel issued a statement upon which the above relation of the facts is based.

HOUSE OF COMMONS.

THURSDAY, JULY 9TH.

Physical Instruction in Elementary Schools.

Mr. KING asked the President of the Board of Education whether physical exercises were a compulsory part of the curriculum in public elementary schools; and whether he would cease to recognise any school which failed to provide for physical instruction in accordance with the code.—Mr. J. A. PEASE answered: Physical training is one of the subjects mentioned in Article 2 of the Code. The article states, however, that it is not necessary for all the subjects mentioned to be taught in every school or class. The importance which the Board attach to instruction in this subject is shown in the introduction to the syllabus of Physical Exercises. In view of what is said there, I think it would be very difficult to satisfy the Board that at any particular school physical training is not required by the needs of the scholars. I am not aware of any school in which physical training is not now included in the curriculum, though its efficiency and adequacy vary considerably.

Sight Tests in the Mercantile Marine.

Mr. LYNCH asked the President of the Board of Trade how many of those rejected for colour blindness, as indicated in the last report, failed with the lantern but passed the wool test and vice versa, and whether he would consider the advisability of giving this information in the reports in future.—Mr. BURNS said in reply: I assume this question refers to the sight tests used in the mercantile marine. 138 candidates passed the wool test and failed in the lantern test. Of these 24 subsequently passed on appeal, and thus 114 finally failed. 101 candidates passed the wool test and in the lantern test were "referred" for further examination. At the latter examination 76 passed and 25 failed. No candidates failed in the wool test and passed in the lantern test. Three candidates were "referred" in the wool test and passed the lantern test, all three subsequently passing a special examination. The number of candidates who pass, fail, or are "referred" in the lantern or wool tests respectively will be given in the next return as suggested. I should add that "referred" means that the candidate was not definitely passed or rejected, but was referred to London for a special examination.

Mr. LYNCH: Will the right honourable gentleman bring a scientific spirit to bear on this question, so that the wool test may be altogether eliminated?—Mr. BURNS: The honourable gentleman is rather belated in his suggestion. The old form of wool test has been abandoned. I had the pleasure of taking the objectors to and the critics of the wool test down to Shoeburyness, and after a pleasant night on the marshes the objectors were silenced and the critics satisfied.

Housing Department at the Local Government Board.

Answering Mr. LANE-FOX, Mr. HERBERT SAMUEL (President of the Local Government Board) said: There is a special department of the Local Government Board which deals exclusively with housing and town planning questions. The department consists of 23 officials, in addition to a staff of eight inspectors whose time is wholly devoted to this work. The services of the Board's technical officers in the medical, engineering, and architectural staffs are also partly given to housing questions.

Sanitary Conditions in the Mercantile Marine.

Mr. BURNS (President of the Board of Trade), replying to various points that had been raised in Committee of Supply on the Board of Trade estimates, said that the department was justified in the present sight test and meant to adhere to it. Several honourable Members had referred to the sanitary condition of ship accommodation, hospitals on ships, crew space, and similar things. He found that whereas there had been a striking diminution in the death-rate in the Royal Navy and the army and also amongst the industrial population in the years from 1891 to 1911, there had been practically no diminution in the deaths from disease in the mercantile marine. He had appointed a small committee of specialists, with medical officers, statistical experts, and others, to examine the whole subject of the mortality in the mercantile marine, and he hoped soon to have from the committee a practical and suggestive report. He was glad to say that on the subject of hospital accommodation for crews much had been done. In January, 1912, the Board of Trade issued a notice to shipowners that in cargo vessels suitable accommodation should be provided for sick and disabled seamen. Of 150 large vessels built in 1902 there were only 10 with crew hospitals, or 7 per cent.; of 160 built in 1912, 28, or 17 per cent., had crew hospitals provided; of 213 built in 1913, 68, or 32 per cent., were provided with crew hospitals. The Board intended by every means in its power to accelerate the provision of hospitals not only on emigrant ships and large steamers but on a large number of tramp steamers, where the men perhaps required hospital accommodation more than on the great liners.

MONDAY, JULY 13TH.

The Drug Fund.

Mr. GODFREY LOCKER-LAMPSON asked the honourable Member for St. George's-in-the-East, as representing the Insurance Commissioners, whether the Government could now make any announcement in regard to the Insurance Committees which had deficiencies on the drug fund in respect of the year ending January, 1914; what the approximate amount of the deficiency was in each case; and whether the Government proposed to make a grant so that the panel chemists might get paid for the drugs they had

supplied on the doctors' orders.—Mr. WEDGWOOD BENN replied: For the reasons already given in my previous replies I am unable to make any general announcement as to the position with regard to any deficiencies for the year 1913. The rest of the question does not accordingly arise.

Sickness Claims under the Insurance Act.

Mr. FRED HALL (Dulwich) asked the Prime Minister whether, in view of the consideration raised by the recently published annual report of the National Health Insurance Commissioners as regarded the financial position of the Approved Societies, the position of deposit contributors, the excessive claims of women, and the bearing of the question of unemployment upon the operation of health insurance generally, he would consider the appointment of a special committee to inquire into the working of the Act as a whole, with a view to formulating comprehensive proposals for its amendment in the light of the experience now available; and whether in the meantime he would postpone any proposal for amendment or limit such proposals to matters of detail which would not admit of delay.—Mr. ASQUITH answered: A special committee appointed last autumn has been examining the whole question of sickness claims under the Insurance Act, and will, I am informed, report shortly. The Chancellor of the Exchequer has already announced that the Government propose to deal with these questions by such means as experience has proved desirable.

TUESDAY, JULY 14TH.

Exemptions from Vaccination.

Mr. NORMAN CRAIG asked the President of the Local Government Board what were the percentages of exemption from vaccination for the years 1906 to 1913 inclusive.—Mr. HERBERT SAMUEL wrote in reply: The figures are as follows:—

Year.	Number of births registered during the year.	Number of exemptions received during the year.	Percentage of statutory exemptions.	Percentage of children ultimately unvaccinated.
1906	935,081	52,391	5·6	16·8
1907	918,042	57,675	6·3	20·4
1908	940,383	162,799	17·3	27·9
1909	914,472	190,689	20·9	32·3
1910	896,962	230,947	25·7	36·3
1911	881,138	248,483	28·2	38·9
1912	872.767	275,929	31·6	42·9
1913	881,480	308,235	35·0	Figures not available.

The Local Government Board receive, in February of each year, returns from all vaccination officers relating to the children born within the previous year but one. These returns show the numbers of such children who have been vaccinated, or found insusceptible of vaccination, or have had small-pox, or have died. The percentages in the last column are based on the numbers of children remaining after the deduction of these classes.

The Work of Sir Ronald Ross.

Mr. COWAN asked the Chancellor of the Exchequer whether he had received a petition to the House from Sir Ronald Ross, K.C.B., F.R.S., asking for compensation for loss in his profession incurred through his long-continued investigations on malaria; whether the petition was based upon the precedents of similar petitions successfully submitted to the House by Dr. Edward Jenner in 1802 and again in 1807, and by George William Manby in 1823; and whether he would recommend Sir Ronald Ross's petition, as required by Standing Order 66, in order to enable it to be laid before the House.—Mr. LLOYD GEORGE replied: I have received the petition referred to, but I have not felt justified in taking the course suggested, which is not in accordance with modern usage.

Notification of Births.

Mr. ALDEN asked the President of the Local Government Board whether, in order to assist the working of the Notification of Births Act, he had any objection to the superintendent registrars handing to the parents who attended to register a birth a notice containing a short reference to the provisions of the Act, and, if he had no such objection, whether he could see his way to issue a circular to the various superintendent registrars calling their attention to the matter.—Mr. HERBERT SAMUEL said in reply: In view of the fact that the notification under the Notification of Births Act has to be given within 36 hours of the birth of a child, while a period of six weeks is allowed for registration, I fear that the advantage of adopting my honourable friend's suggestion would not compensate for the additional trouble caused.

BOOKS, ETC., RECEIVED.

BAILLIÈRE, TINDALL, AND COX, London.

Sleeping Sickness in the Island of Principe. By Surgeon Captain B. F. Bruto da Costa, Health Officer and Chief of the Sleeping Sickness Commission. Translated by Lieutenant-Colonel J. A. Wyllie, F.R.G.S., Indian Army (retired).

Aids to Forensic Medicine and Toxicology. By W. Murrell, M.D., F.R.C.P. Revised by W. G. Aitchison Robertson, M.D., D.Sc., F.R.C.P. Edin. Eighth edition. Price 2*s.* 6*d.* net.

Aids to Dental Anatomy and Physiology. By Arthur S. Underwood, M.R.C.S., L.D.S. Third edition. Price 2*s.* 6*d.* net.

Manual of Anatomy, Systematic and Practical, including Embryology. By A. M. Buchanan, M.A., M.D., C.M., F.R.F.P.S. Glasg., Professor of Anatomy in Anderson's College, Glasgow. Second impression in the old nomenclature. Price 21*s.* net.

Insanity in Everyday Practice. By E. G. Younger, M.D. Brux., M.R.C.P. Lond., D.P.H., &c., Senior Physician, Finsbury Dispensary. Third edition. Price 3*s.* 6*d.* net.

BALE (JOHN), SONS, AND DANIELSSON, London.

Handbook for Infant Health Workers: In connexion with Schools for Mothers. By R. Manwood H. Walford, M.R.C.S. Eng., L.R.C.P. Lond. Price 1*s.* 6*d* net.

Historical Sketches of Old Charing: The Hospital and Chapel of St. Mary Roncevall: Eleanor of Castile, Queen of England, and the Monuments Erected in Her Memory. By James Galloway, A.M., M.D., Senior Physician and a Vice-President, Charing Cross Hospital. Price 10*s.* 6*d.* net. This volume is sold for the benefit of Charing Cross Hospital.

BARTH, JOHANN AMBROSIUS, Leipzig.

Handbuch der Tuberkulose in fünf Bänden. Herausgegeben von Professor Dr. L. Brauer, Hamburg-Eppendorf, Allg. Krankenhaus; Dr. G. Schröder, Dirigierender Arzt der neuen Heilanstalt für Lungenkranke zu Schömberg, O.-A. Neuenbürg; Dr. F. Blumenfeld, Arzt für Nasen-, Hals- und Lungenkrankheiten in Wiesbaden. Zweiter Band, mit 15 Abbildungen, 3 Kurven, und 6 schwarzen Tafeln. Preis M.20.

BELL, GEORGE, AND SONS, London.

Eve Repentant, and Other Poems. By Augustus H. Cook, M.B. Lond. Price 2*s.* 6*d.* net.

CHURCHILL, J. AND A., London.

St. Thomas's Hospital Reports. New Series. Edited by Dr. J. J. Perkins and Mr. C. A. Ballance. Vol. XLI. Price 8*s.* 6*d.*

FISCHER, GUSTAV, Jena.

Handbuch der gesamten Therapie. In sieben Bänden. Herausgegeben von Professor Dr. F. Penzoldt, Erlangen, und Dr. R. Stintzing, Jena. Fünfte, umgearbeitete Auflage. Lieferung 17 (Band II., Seite 689–763; Band III., Seite 641–704). Price M.3.50. Lieferung 18 and 19 (Band III., Seite 705–797; Band VI., Seite 161–384). Price M.3.50.

Handbuch der Vergleichenden Physiologie. Herausgegeben von Hans Winterstein (Rostock). 43 Lieferung. Band III., Physiologie des Energiewechsels, Physiologie des Formwechsels. Seite 1599–1760. Price M.5.

Die Erregungsleitung im Wirbeltierherzen. Ein Vortrag nach Vergleichend Physiologischen Untersuchungen. Von Dr. Med. et Phil. Ernst Mangold. Price M.1.20.

Das Herzflimmern, seine Entstehung und Beziehung zu den Herznerven, von Dr. Ludwig Haberlandt. Price M.50.

Handbuch der Immunitätsforschung und experimentellen Therapie. Mit besonderer Berücksichtigung der Technik und Methodik. Herausgegeben von Prof. Dr. R. Kraus und Dr. C. Levaditi. 1 Lieferung. Price M.5.

Die Uebertragungsweise der Rattentrypanosomen. Von Wilhelm Nöller, Tierarzt. Abdruck aus: "Archiv für Protistenkunde, Band XXV., u. 34. Price M.3.

Appointments.

Successful applicants for vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

BAINBRIDGE, WILLIAM, M.B., Ch.B. Edin., D.P.H. Bristol, has been appointed Honorary Assistant Ophthalmic Surgeon to the Hull Royal Infirmary.

BRIDE, T. MILNER, M.D. Vict. Manch., has been appointed Honorary Surgeon to the Manchester Royal Eye Hospital.

BRYAN, C. A. D., M.R.C.S., L.R.C.P. Lond., has been appointed Certifying Surgeon under the Factory and Workshop Acts for the East Leicester District of the county of Leicester.

CLARKE, R., M.D. Glasg., has been appointed Certifying Surgeon under the Factory and Workshop Acts for the Cambuslang District of the county of Lanark.

CRAIG, F., M.B., B.S. R.U.I., has been appointed Medical Officer of Health to the Londonderry Corporation.

GREEVES, F. J., L.R.C.P. & S. Irel., has been appointed Certifying Surgeon under the Factory and Workshop Acts for the South Blackburn District of the county of Lancaster.

HARRIS, WILFRED, M.D., B.C. Cantab., F.R.C.P. Lond., has been appointed Physician to the Royal Westminster Ophthalmic Hospital.

HOWELL, JAMES B., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health for Hammersmith.

MACGREGOR, ALASTAIR, M.D., C.M. Edin., has been appointed Chief Assistant in the Electrical Department at St. Bartholomew's Hospital.

MACKAY, D. MATHESON, M.D., C.M. Edin., M.R.C.S., L.R.C.P. Lond., has been appointed Honorary Ophthalmic Surgeon to the Hull Royal Infirmary.

MULLALLY, G. T., M.B., B.S. Lond., has been appointed Surgical Registrar and Demonstrator of Anatomy at Guy's Hospital Medical School.

OZANNE, R. C., M.B., B.Ch. Oxfd., has been appointed Surgical Registrar and Demonstrator of Anatomy at Guy's Hospital Medical School.

RYLE, J. A., M.B., B.S. Lond., has been appointed Medical Registrar to Guy's Hospital Medical School.

SCHLESINGER, B. G., M.B., B.S. Lond., has been appointed Surgical Registrar and Demonstrator of Anatomy at Guy's Hospital Medical School.

SPRIGGS, N. I., M.R.C.S., L.R.C.P. Lond., has been appointed Certifying Surgeon under the Factory and Workshop Acts for the West Leicester District of the county of Leicester.

SPROTT, BARBARA, M.B., B.S. Lond., has been appointed Anæsthetist to the Chelsea Hospital for Women.

STANLEY, E. GERALD, M.S. Lond., F.R.C.S. Eng., has been appointed Assistant Surgeon to the Dreadnought Hospital, Greenwich.

TODD, A. H., M.B., B.S. Lond., has been appointed Surgical Registrar and Demonstrator of Anatomy at Guy's Hospital Medical School.

WADE, NOEL, M.D. Edin., has been appointed Medical Officer of Health to the Risca Urban District Council.

WALKER, M. G. L., M.B., Ch.B. Leeds, has been appointed Certifying Surgeon under the Factory and Workshop Acts for the Crosshills District of the county of York.

WILLIAMS, E. K., M.R.C.S., L.R.C.P. Lond., has been appointed Certifying Surgeon under the Factory and Workshop Acts for the Billesdon District of the county of Leicester.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BARROW-IN-FURNESS, NORTH LONSDALE HOSPITAL.—House Surgeon. Salary £150 per annum, with residence, board, and laundry.

BATH, WINSLEY SANATORIUM FOR CONSUMPTION.—Assistant Resident Medical Officer, unmarried. Salary £150 per annum, with board, residence, and laundry.

BEDFORD COUNTY HOSPITAL.—Assistant House Surgeon. Salary £100 per annum, with board, lodging, and laundry.

BETHNAL GREEN INFIRMARY, Cambridge Heath, E.—Assistant Medical Officer. Salary at rate of £160 per annum, with apartments, board, and washing.

BIRKENHEAD BOROUGH HOSPITAL.—Senior House Surgeon. Salary £120 per annum, with board and laundry.

BIRMINGHAM, CITY FEVER HOSPITAL, Little Bromwich.—Assistant Medical Officer. Salary £200 per annum, with board, residence, and laundry.

BIRMINGHAM AND MIDLAND EYE HOSPITAL, Church-street.—Junior House Surgeon. Salary £100 per annum, with residence, board, &c.

BIRMINGHAM, QUEEN'S HOSPITAL.—House Surgeon for six months. Salary at rate of £50 per annum, with board, lodging, and washing.

BIRMINGHAM UNION.—Fourth Assistant Medical Officer at Dudley-road Infirmary. Salary £140 per annum. Also Assistant Medical Officer at Selly Oak Infirmary and House. Salary £160 per annum. Each with apartments, rations, laundry, and attendance.

BLACKBURN AND EAST LANCASHIRE ROYAL INFIRMARY.—Junior House Surgeon. Salary £100 per annum, with board, residence, &c.

BOLINGBROKE HOSPITAL, Wandsworth Common, S.W.—House Surgeon for six months. Salary £75 per annum, with board, residence, and laundry.

BOLTON INFIRMARY AND DISPENSARY.—Two Honorary Aural Surgeons.

BOOTLE BOROUGH HOSPITAL.—Senior and Junior House Surgeons. Salaries £120 and £100 respectively, with residence, board, and laundry.

BRADFORD CITY HOSPITAL FOR CONSUMPTIVES.—Resident Medical Officer. Salary £200 per annum, with board and residence.

BRADFORD ROYAL INFIRMARY.—House Surgeons, unmarried. Salary £100 per annum, with board, residence, and washing.

BRIGHTON THROAT AND EAR HOSPITAL, Church-street, Queen's-road.—Non-Resident House Surgeon for six months. Salary at rate of £150 per annum.

BRISTOL CITY ASYLUM.—Second Assistant Medical Officer, unmarried. Salary £200 per annum, with apartments, board, washing, and attendance.

BURY ST. EDMUNDS, WEST SUFFOLK GENERAL HOSPITAL.—Resident Medical Officer, unmarried. Salary £120 per annum, with board, lodging, and laundry.

CANNING TOWN WOMEN'S SETTLEMENT HOSPITAL, Balaam-street, Plaistow, E.—Female Senior Resident Medical Officer. Salary £120 per annum, with board and laundry.

CARDIFF, KING EDWARD VII.'S HOSPITAL.—Two House Surgeons for six months. Salary at rate of £100 per annum, with board, residence, and laundry.

CARDIFF AND COUNTY PUBLIC HEALTH LABORATORY.—Bacteriologist. Salary £300 per annum.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—House Physician for six months. Salary at rate of £75 per annum, with board, residence, and washing.

CITY OF WESTMINSTER UNION INFIRMARY, Fulham-road, S.W.—Third Assistant Medical Officer. Salary £140 per annum, with board, residence, and washing.

COLCHESTER, ESSEX COUNTY HOSPITAL.—House Surgeon and House Physician. Salary £100 per annum, with board, residence, and washing in each case.

DERBY, DERBYSHIRE ROYAL INFIRMARY.—Honorary Assistant Physician.

DEVONPORT, ROYAL ALBERT HOSPITAL.—House Surgeon, unmarried. Salary £150 per annum, with board and laundry. Also Locum Tenen as House Surgeon. Salary £5 5s. per week, with board and residence.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark, S.E.—House Physician. Salary at rate of £75 per annum, with board, residence, and washing.

FALKLAND ISLANDS.—Assistant Colonial Surgeon, unmarried. Salary £400 per annum.

FAREHAM, HANTS COUNTY ASYLUM.—Third Assistant Medical Officer, unmarried. Salary £250 per annum, with apartments, board, washing, and attendance.

GLASGOW UNIVERSITY.—Lecturer in Pharmacology. Salary £350 to £400 per annum. Also Assistant in Department of Physiology. Salary £150 per annum.

GREENWICH UNION INFIRMARY AND WORKHOUSE.—First Assistant Medical Officer, unmarried. Salary £175 per annum, with apartments, rations, and washing.

GRIMSBY AND DISTRICT HOSPITAL.—Senior House Surgeon. Also Junior House Surgeon. Salaries £100 and £80 per annum respectively, with board, lodging, attendance, and washing.

HALIFAX ROYAL INFIRMARY.—Third House Surgeon, unmarried. Salary £100 per annum, with residence, board, and washing.

HEREFORDSHIRE COUNTY COUNCIL.—Assistant to Medical Officer of Health. Salary £300 per annum.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton, S.W.—House Physician for six months. Salary 30 guineas.

HUDDERSFIELD, COUNTY BOROUGH EDUCATION AUTHORITY.—Assistant School Medical Officer. Salary £300 per annum.

HULL ROYAL INFIRMARY.—Senior House Surgeon, unmarried. Salary £150 per annum, with board and apartments. Also Assistant House Surgeon. Salary at rate of £100 per annum, with board and lodging.

HULL, VICTORIA CHILDREN'S HOSPITAL, Park-street.—Female Assistant House Surgeon. Salary £45 per annum, with board and laundry.

INFECTIOUS HOSPITALS SERVICE OF METROPOLITAN ASYLUMS BOARD.—Assistant Medical Officers, unmarried. Salary £250 per annum, with board, lodging, and washing.

KING'S COLLEGE HOSPITAL, Denmark-hill, S.E.—Assistant Obstetric Physician.

KIRKMABRECK PARISH, Creetown, Kirkcudbrightshire.—Medical Officer. Salary £40 per annum.

LEAMINGTON SPA, WARNEFORD, LEAMINGTON, AND SOUTH WARWICKSHIRE GENERAL HOSPITAL.—House Surgeon and House Physician. Salary £100 and £25 respectively, with board, residence, and laundry.

LEEDS PUBLIC DISPENSARY.—Junior Resident Medical Officer. Salary £130 per annum, with board, residence, and laundry.

LEICESTER, NORTH EVINGTON POOR-LAW INFIRMARY.—Senior Assistant Medical Officer and Junior Assistant Medical Officer. Salaries £200 and £150 per annum respectively, with apartments, rations, laundry, and attendance.

LIVERPOOL DISPENSARIES.—Assistant Surgeon, unmarried. Salary £110 per annum, with board and apartments.

LIVERPOOL SCHOOL OF TROPICAL MEDICINE.—Research Assistant at Runcorn Research Laboratory. Salary £150 per annum.

LIVERPOOL STANLEY HOSPITAL.—Two House Physicians and Two House Surgeons. Salary £80 per annum each, with board, residence, and laundry.

LIVERPOOL UNIVERSITY, FACULTY OF MEDICINE.—Johnston Chair of Bio-Chemistry. Salary £600 per annum.

LOWESTOFT AND NORTH SUFFOLK HOSPITAL.—House Surgeon, unmarried. Salary at rate of £150 per annum, with board, residence, and laundry.

MAIDSTONE, KENT COUNTY ASYLUM.—Fourth Assistant Medical Officer, unmarried. Salary £250 per annum, with quarters, board, attendance, washing, &c.

MAIDSTONE, WEST KENT GENERAL HOSPITAL.—Assistant House Surgeon, unmarried. Salary £80 per annum, with board, lodging, and washing.

MANCHESTER HOSPITAL FOR CONSUMPTION AND DISEASES OF THE THROAT AND CHEST.—Assistant Medical Officer and Pathologist. Salary £60 per annum.

MANCHESTER, HULME DISPENSARY, Dale-street, Stretford-road.—House Surgeon. Salary £180 per annum, with apartments, attendance, coal, and gas.

MANCHESTER NORTHERN HOSPITAL FOR WOMEN AND CHILDREN, Parkplace, Cheetham Hill-road.—House Surgeon. Salary £120 per annum, with apartments and board.

MANCHESTER ROYAL EYE HOSPITAL.—Junior House Surgeon. Salary £80 per annum, with residence, board, and washing.

MANCHESTER ROYAL INFIRMARY.—Medical Officer for Out-Patients and Accidents for six months. Salary at rate of £100 per annum, with board and residence.

NATAL, PROVINCE OF.—Medical Officer for Medical Inspection of Schools. Salary £700 per annum.

NATIONAL HOSPITAL FOR DISEASES OF THE HEART, Westmoreland-street, W.—Resident Medical Officer for three or nine months. Salary at rate of £80 per annum, with board, residence, and washing.

NEWARK-UPON-TRENT HOSPITAL.—Female Resident Medical Officer, unmarried. Salary £100 per annum, with board, lodging, and laundry.

NEW HOSPITAL FOR WOMEN, Euston-road.—Female Obstetric Assistant. Board, lodging, and laundry.

NORTHAMPTON GENERAL HOSPITAL.—House Surgeon. Salary £120 per annum, with apartments, board, washing, attendance, &c.

NOTTINGHAM, BAGTHORPE INSTITUTION AND INFIRMARY.—Resident Assistant Medical Officer, unmarried, for six months. Salary at rate of £165 per annum, with apartments, &c.

NOTTINGHAM GENERAL DISPENSARY.—Assistant Resident Surgeon, unmarried. Salary £180 per annum, with apartments (not board), attendance, light, and fuel.

PARK HOSPITAL FOR CHILDREN, Hither Green, London, S.E.—Temporary Assistant Medical Officer.

PETERBOROUGH INFIRMARY AND DISPENSARY.—House Surgeon, unmarried. Salary at rate of £120 per annum, with residence, board, and laundry.

PRESTON, COUNTY ASYLUM, Whittingham, Lancs.—Assistant Medical Officer, unmarried. Salary commencing £250, rising to £300 per annum, with board, apartments, &c.

PUTNEY HOSPITAL, Putney Common, S.W.—Resident Medical Officer. Salary £100 per annum, with rooms, board, and laundry.

QUEEN'S HOSPITAL FOR CHILDREN, Hackney-road, Bethnal Green, E.—House Surgeon for six months. Salary £80 per annum, with board, residence, and washing.

ROCHDALE INFIRMARY AND DISPENSARY.—Senior House Surgeon, unmarried. Salary £120 per annum, with board, residence, and laundry.

ROYAL EAR HOSPITAL, Soho.—House Surgeon. Salary £40 per annum.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City-road, E.C.—Resident Medical Officer. Also House Physician. Both for six months. Salaries at rate of £120 and £60 per annum respectively, with board, lodging, and washing.

ROYAL NAVAL MEDICAL SERVICE.—Twenty-five Appointments.

ROYAL WATERLOO HOSPITAL FOR CHILDREN AND WOMEN, S.E.—Junior Resident Medical Officer for six months. Salary at rate of £70 per annum, with board and washing.

ST. MARY'S HOSPITAL FOR WOMEN AND CHILDREN, Plaistow, E.—Assistant Resident Medical Officer. Salary at rate of £100 per annum, with board, residence, and laundry.

ST. PAUL'S HOSPITAL FOR SKIN AND GENITO-URINARY DISEASES, Red Lion-square, Holborn, W.C.—Assistant Surgeon.

SALFORD ROYAL HOSPITAL.—House Surgeon, Junior House Surgeon, and Casualty House Surgeon. Salary at rate of £100 per annum each, with board and residence.

SALFORD UNION INFIRMARY.—Resident Assistant Medical Officer, unmarried. Salary £150 per annum, with apartments, attendance, and rations.

SCARBOROUGH HOSPITAL AND DISPENSARY.—Senior and Junior House Surgeons. Salaries £100 and £80 per annum respectively, with board, residence, &c.

SHEFFIELD, EAST END BRANCH OF THE CHILDREN'S HOSPITAL (OUT-PATIENT DEPARTMENT).—House Surgeon. Salary £120 per annum, with board and residence.

SHREWSBURY, SALOP INFIRMARY.—House Physician. Salary at rate of £110 per annum, with board and apartments.

SOUTH SHIELDS, INGHAM INFIRMARY AND SOUTH SHIELDS AND WESTOE DISPENSARY.—Junior House Surgeon. Salary £115 per annum, with residence, board, and washing.

SUNDERLAND ROYAL INFIRMARY.—House Physician. Salary £120 per annum, with board, residence, and laundry.

SWANSEA GENERAL AND EYE HOSPITAL.—Two House Surgeons. Salary £125 per annum, with board, washing, and attendance.

THROAT HOSPITAL, Golden-square, W.—Two Resident House Surgeons. Salary £75 per annum, with board, residence, &c.

TRURO, ROYAL CORNWALL INFIRMARY.—House Surgeon, unmarried. Salary £100 per annum, with rooms, board, and washing.

VICTORIA HOSPITAL FOR CHILDREN, Tite-street, Chelsea, S.W.—House Physician for six months. Salary £40, with board and lodging.

WALSALL AND DISTRICT HOSPITAL.—Assistant House Surgeon. Salary £110 per annum, with board, residence, and laundry.

WEST BROMWICH AND DISTRICT HOSPITAL.—Assistant Resident House Surgeon and Anæsthetist, unmarried. Salary £100 per annum, with board, residence, and washing.

WEST HAM, COUNTY BOROUGH OF.—Assistant School Medical Officer. Salary £250 per annum.

WEST HAM AND EASTERN GENERAL HOSPITAL, Stratford.—Senior House Physician and Senior House Surgeon. Salary at rate of £100 per annum, with board, residence, and washing. Also Junior House Physician and Junior House Surgeon. Salary at rate of £75 per annum, with board, residence, and washing.

WINCHESTER, ROYAL HAMPSHIRE COUNTY HOSPITAL.—House Physician. Salary £30 per annum.

WREXHAM INFIRMARY.—Resident House Surgeon. Salary £120 per annum, with board, lodging, and washing.

YORK COUNTY HOSPITAL.—House Physician for six months. Salary at rate of £100 per annum, with board, residence, &c.

THE Chief Inspector of Factories, Home Office, London, S.W., gives notice of vacancies for Certifying Surgeons under the Factory and Workshop Acts at East Newcastle, in the county of Northumberland; at Maiden Newton, in the county of Dorset; and at West Newcastle, in the county of Northumberland.

Births, Marriages, and Deaths.

BIRTHS.

PAGE.—On July 10th, at Old Market-street, Bristol, the wife of Lionel Page, M.R.C.S. Eng., L.R.C.P. Eng., of a son.

WILLIAMS.—On July 7th, at Lansdowne-road, Clapham, the wife of Cyril Williams, M.R.C.S., L.R.C.P., of a daughter.

MARRIAGES.

COLE—BRIDGMAN.—On July 4th, at St. Olave's, Finsbury Park, N., John William Edward Cole, M.B., to Caroline Fanny Bridgman, widow of the late Herbert Bridgman, Esq., L.S.A.

DE BRENT—DAWS.—On July 7th, at St. George's Church, Catford, Harold John de Brent., M.R.C.S., L.R.C.P., to Elsie, third daughter of J. E. Daws, Esq., of Bournemouth.

HICKS—JAMES.—On July 8th, at Holy Trinity, South Hampstead, by Rev. Arthur Griffiths, John Athelstan Braxton Hicks, M.D., M.R.C.P., only son of the late A. Braxton Hicks, Barrister-at-law, H.M. Coroner, and Mrs. A. Braxton Hicks, 3A, Perham-road, W., to Adeleine Stephanie, daughter of the late Wm. Lamprey James, Esq., of Exeter, and Mrs. Hall, of Westcliff-on-Sea.

DEATHS.

ASHWORTH.—On July 14th, at Vigne House, Cliftonville, Margate, Kate, wife of J. Henry Ashworth, M.D. St. And., M.R.C.P. Edin.

PITT.—On July 10th, at Great Somerford, Chippenham, Charles Wightwick Pitt, M.R.C.S., L.S.A., aged 71.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

HEALTH OF BARBADOS.

A REPORT on the Barbados Blue-book for the year 1912-13, prepared by the Acting Colonial Secretary, Mr. W. L. C. Phillips, has just been issued. It gives the estimated population of the colony as 172,203—71,641 males and 100,562 females. The birth-rate was 36·8 per 1000 as compared with 35·2 the previous year, and the death-rate 41 per 1000 as against 26·3. There was an increase of 2505 in the number of burials, and as there was no outbreak of quarantinable disease, that increase is attributed to the privation consequent on the drought experienced throughout 1912. Illegitimate births numbered 3799, or 59·6 per cent., of the total births. The number of burials of children under one year of age was 2642, a rate of 416 per 1000, as against 263 in 1911 and 268 in 1910. The average maximum temperature for the year 1912 was 84·3° F. and the average minimum 75·7°. The average rainfall for the island for the year from 145 stations was 41·49 inches, as compared with 59·28 inches from 154 stations for the previous year, and with 61·51 inches from an average of 120 stations for the 66 years ended 1912. The rainfall in Barbados is extremely localised as regards distribution over the island. In England it is possible to describe several counties in the daily returns of rainfall. In Barbados, however, there would be notable inaccuracy even if the description was limited to parishes, because the clouds are so capricious that while one planter is looking at a rapidly filling rain gauge with chuckling contentment, a neighbour may be alluding—with a planter's emphasis—to the rainless sunshine which threatens to make his pocket absolutely empty. This characteristic applies as well to those parishes which are flat and without hills as to those which are of an entirely hilly character and to those which contain both flat lands and hills. Cases frequently occur where, in adjoining plantations of a few hundred acres each in the same parish and with the same natural features, one will be abundantly watered and the other remain dry. A recent case may be cited where in three adjoining plantations in St. Peter's parish the precipitation of rain on one was four inches, while in each of the adjoining properties the precipitation was only four-hundredths of one inch. There are no woods or forests in the island which in other places may account for differences occurring in the rainfall, and no explanation of the peculiarity can be found in natural causes. Mention has been made of the drought of 1912. It caused a decrease in the revenue and a decrease in the trade of the colony, as well as a practical failure of the provision crops, with resulting high prices for imported foodstuffs, increasing the cost of living for all classes. It diminished the wage-earnings of the people and swelled the ranks of the recipients of poor relief; it increased the number of criminals, brought many to the verge of starvation, and, most serious of all, it was the undoubted cause of the very high increase in the death-rate. The subject cannot be discussed without referring to the admirable spirit of fortitude and patience displayed by the people in their sufferings.

"ADVT."

To the Editor of THE LANCET

SIR,—A few weeks ago I drew your attention to a medical man's announcement in the Court Circular of a daily newspaper. Here is another example from to-day's paper:—

> Dr. H——, on his return to practice, desires to thank his many friends who kindly inquired after him during his recent illness.

I suggest that the letters "Advt." ought to be added in such cases.

I am, Sir, yours faithfully,

July 13th, 1914. P. R. N.

FAITH-HEALING COMBINED WITH DRUGS.

AN inquest recently held by Mr. R. Kemp at Hounslow on the body of Miss Kate Addison Scott showed, as the coroner observed at its conclusion, the extraordinarily easy way in which members of the public are "taken in by quasi-religious faith-healers." The deceased, who had long suffered from a nervous complaint and was paralysed, had entered the house kept by a man named Orlando Edgar Miller, a person without medical qualifications, who described himself at the inquest as a "teacher, lecturer, and healer." There she paid 5 guineas a week, and received treatment which combined "the laying on of hands and giving the right heart," injections, cascara, and scopolamine.

Dr. H. L. Wilson, who had before attended the deceased, was eventually called in and found her moribund. His

evidence was supplemented by that of Dr. L. B. Christian and Dr. W. H. Willcox, but neither of these gentlemen was able to say that death was due to, or had been accelerated by the use of, scopolamine. A verdict was returned ascribing it to natural causes, with a request from the jury to the coroner that he should severely censure Miller for administering a dangerous drug which might have accelerated death.

HEALTH AND SANITATION IN SOUTHERN NIGERIA.

A REPORT on the Blue-book for the Colony and Protectorate of Southern Nigeria (which is now in course of amalgamation with Northern Nigeria under the governorship of Sir F. Lugard) has been received at the Colonial Office and ordered by His Majesty to be presented to both Houses of Parliament. It states, *inter alia*, that the native population is estimated at approximately 7,856,000, divided in the three provinces as follows: Western Province, 2,151,000; Central Province, 2,408,000; Eastern Province, 3,297,000. The European population consists of 760 Government officials and 1080 non-officials. During the year 1912 there were 26 deaths and 32 cases of invaliding among European non-officials, and 9 deaths and 57 invalidings among Government officials. At Lagos Hospital (Western Province) the out-patient department was attended by 5236 persons, (Europeans and natives), whilst the in-patient department treated 2218. Minor and major operations were performed to the number of 353. In the Yaba leper asylum 23 cases were treated and there was one death. In the Central Province the out-patients at Onitsha Hospital numbered 5291 and at Warri Hospital 5489; the in-patients at the former totalled 1090 and at the latter 72. 372 in-patients (of whom 24 died) were treated in the native hospital. In the Eastern Province 2 cases received treatment at the Opobo European Hospital, whilst at the Calabar Hospital 8056 out-patients sought treatment, and there were 132 in-patients (with 5 deaths) treated in the European wards and 1194 (with 70 deaths) in the native wards. An outbreak of dysentery and an epidemic of chicken-pox occurred in Calabar Prison. During the year 1912, owing to the increased interest in the work by all concerned, and more especially to the frequent and thorough visits to most of the European stations and large native towns by sanitary officers, the sanitation of the Colony and Protectorate showed a decided change for the better. The matters of water-supply, disposal of refuse and night-soil, prison ventilation and accommodation, the housing of Europeans, and the mosquito-proofing of houses received special attention. The progress of sanitation has been greatly facilitated by (*a*) the employment of European sanitary inspectors, who have been posted in the more important centres, and an increase in the number of native inspectors; (*b*) the framing or alteration of Ordinances and Orders in Council with regard to public health matters; (*c*) the prosecution of an active anti-mosquito campaign; (*d*) the adoption of sanitary schemes suited to various large centres; (*e*) the erection of new infectious diseases hospitals; (*f*) better provision for fumigation and disinfection of buildings, &c.; (*g*) a more thorough and systematic inspection of the railway; and (*h*) the reclamation of swamps.

URINE-COLLECTING BOTTLES.

U.C.B. writes: I think I remember seeing some description in one of the medical journals of urine-collecting bottles a little time ago. I think a part of the surface of the bottle was ground rough for writing on with pencil. I should be much obliged if any of your readers could give me a reference.

DRAWINGS OF ST. BARTHOLOMEW'S HOSPITAL.

OLD St. Bartholomew's men in all parts of the world will be pleased to learn that Mr. Hanslip Fletcher, whose sketches of Guy's and King's College Hospitals have been widely appreciated, has now published through Messrs. W. H. Beynon and Co., St. Alban's Lodge, Cheltenham, a series of plates illustrating their hospital. This consists of eight replicas of wash drawings made recently at St. Bartholomew's Hospital, and the subjects are as follows: King Henry VIII. gateway; bird's-eye view of the Smithfield entrance; the square; the fountain; the medical school buildings; the staircase to the great hall; the Church of St. Bartholomew the Less; and the Church of St. Bartholomew the Great. The last-named, which is an interior view, showing the tomb of Rahere, is charmingly reproduced in colour; the remainder are in monochrome. The size of the plates, including margin, is 17 inches by 13 inches, and the subscription price for artist's signed proofs on Japanese paper is 2 guineas the set. Those specimens which we have seen are very well designed and reproduced, and give a good idea of scenes which are familiar to all who have worked in the hospital. Mr. Hanslip Fletcher is particularly happy in his treatment of such architectural subjects.

THE PORT OF LONDON.

THE Port of London Authority, 109, Leadenhall-street, London, E.C., has issued an interesting volume dealing with the past and present history of the Thames and its docks. The letterpress is by Douglas Owen and the illustrations are by Charles J. De Lacy. The book briefly traces the rise of the Port of London from its earliest days, and relates the circumstances which eventually led up to the creation of the Port of London Authority, while it deals fully with the great scheme of improvements now in course of execution.

RARE MEDICAL BOOKS.

WE have received from Messrs. Funk and Wagnalls Company, of Salisbury-square, London, E.C., an illustrated catalogue containing many interesting medical items. This firm offers to send a copy gratis to any of our readers who make application for it.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

Medical Diary for the ensuing Week.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies-street, W.C.

MONDAY.—4 P.M., Dr. H. C. Semon: Clinique (Skin). 5.15 P.M., Lecture:—Dr. W. C. Topley: Laboratory Aids to Diagnosis in Obscure Febrile Cases.

TUESDAY.—4 P.M., Dr. E. B. Smith: Clinique (Medical). 5.15 P.M., Lecture:—Mr. A. Edmunds: Abdominal Pain.

WEDNESDAY.—4 P.M., Mr. E. C. Hughes: Clinique (Surgical). 5.15 P.M., Lecture:—Sir W. Arbuthnot Lane, Bart.: Fractures.

THURSDAY.—4 P.M., Dr. C. O. Hawthorne: Clinique (Medical). 5.15 P.M., Lecture:—Dr. E. Wynter: Herpes.

FRIDAY.—4 P.M., Mr. E. D. Davis: Clinique (Ear, Nose, and Throat). 5.15 P.M., Lecture:—Dr. W. Wingrave: The Pathology of Warts.

POST-GRADUATE COLLEGE, West London Hospital, Hammersmith-road, W.

MONDAY.—10 A.M., Dr. Simson: Diseases of Women. 10.30 A.M., Medical Registrar: Demonstration of Cases in Wards. 12 noon, Dr. Bernstein: Pathological Demonstration. 2 P.M., Medical and Surgical Clinics. X Rays. Mr. D. Armour: Operations. Dr. Pritchard: Bacterial Therapy Department. Mr. B. Harman and Mr. Gibb: Diseases of the Eye. 5 P.M., Lecture:—Dr. Owen: Glycosuria.

TUESDAY.—10 A.M., Dr. Robinson: Gynæcological Operations. Dr. Owen: Demonstration of Cases in Wards. 12 noon, Mr. T. Gray: Demonstration of Fractures, &c. 2 P.M., Medical and Surgical Clinics. X Rays. Mr. Baldwin: Operations. Dr. Davis: Diseases of the Throat, Nose, and Ear. Dr. Pernet: Diseases of the Skin. 5 P.M., Lecture:—Dr. Owen: Glycosuria.

WEDNESDAY.—10 A.M., Dr. Saunders: Diseases of Children. Dr Davis: Operations of the Throat, Nose, and Ear. 2 P.M., Medical and Surgical Clinics. X Rays. Mr. Pardoe: Operations. Dr. Simson: Diseases of Women. Mr. Gibb: Diseases of the Eye. 5 P.M., Lecture:—Dr. Owen: Addison's Disease.

THURSDAY.—9 A.M., Dr. Bernstein: Bacterial Therapy Department. 2 P.M., Medical and Surgical Clinics. X Rays. Mr. D. Armour: Operations. Mr. B. Harman: Diseases of the Eye.

FRIDAY.—10 A.M., Dr. Simson: Gynæcological Operations. 2 P.M., Medical and Surgical Clinics. X Rays. Mr. Baldwin: Operations. Dr. Davis: Diseases of the Throat, Nose, and Ear. Dr. Pernet: Diseases of the Skin.

SATURDAY.—10 A.M., Dr. Saunders: Diseases of Children. Dr. Davis: Operations of the Throat, Nose, and Ear. Mr. B. Harman: Eye Operations. 2 P.M., Medical and Surgical Clinics. X Rays. Mr. Pardoe: Operations.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.

MONDAY.—Clinics:—10.30 A.M., Surgical Out-patient (Mr. B. Gillespie). 2.30 P.M., Medical Out-patient (Dr. T. R. Whipham); Gynæcological (Dr. Banister). 3 P.M., Medical In-patients (Dr. R. M. Leslie).

TUESDAY.—2.30 P.M., Operations. Clinics:—Medical Out-patient (Dr. A. G. Auld); Surgical (Mr. Howell Evans); Nose, Throat, and Ear (Mr. H. D. Gillies). X Ray and Electrical Methods (Dr. Metcalfe). 3.30 P.M., Medical In-patient (Dr. A. J. Whiting).

WEDNESDAY.—Clinics:—2 P.M., Throat Operations (Mr. Gillies). 2.30 P.M., Children's Out-patient (Dr. T. R. Whipham); Skin (Dr. G. N. Meachen); Eye (Mr. Dorell).

THURSDAY.—2.30 P.M., Gynæcological Operations (Dr. A. B. Giles). Clinics:—Medical Out-patient (Dr. A. J. Whiting); Surgical (Mr. Carson); X Rays and Electrical Methods (Dr. Metcalfe).

FRIDAY.—2.30 P.M., Operations. Clinics:—Medical Out-patient (Dr. A. G. Auld); Surgical (Mr. B. Gillespie); Eye (Mr. R. P. Brooks). 3 P.M., Medical In-patient (Dr. G. P. Chappel).

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, Medical School, City-road, E.C.

MONDAY.—1.30 P.M., Department for the Prevention of Consumption. 2 P.M., Cardiac Department, Dr. Stott; Out-patient Department, Dr. Phear, Dr. S. Thompson. 3 P.M., Wards, Dr. Phear.

TUESDAY.—9 A.M., Laryngological Department, Mr. Mant. 1.30 P.M., Department for the Prevention of Consumption. 2 P.M., Out-patient Department, Dr. M. Leslie, Dr. B. King; Operations, Mr. A. Evans. 3 P.M., Wards, Dr. White. 4 P.M., Wards, Dr. M. Leslie.

WEDNESDAY.—2 P.M., Wards, Dr. A. Davies; Out-patient Department, Dr. Drysdale, Dr. Kellie. 4 P.M., Wards, Dr. Drysdale. 4.30 P.M., Roentgen Ray Department, Dr. Jordan.
THURSDAY.—9.30 A.M., Dental Department, Mr. G. Thomson. 10 A.M., Cardiac Department, Dr. Stott. 1.30 P.M., Department for the Prevention of Consumption. 2 P.M., Out-patient Department, Dr. Phear, Dr. S. Thompson. 4.30 P.M. Laryngological Department, Mr. Mant.
FRIDAY.—1.30 P.M., Department for the Prevention of Consumption. 2 P.M., Wards, Dr. Calvert; Out-patient Department, Dr. M. Leslie, Dr. B. King.
SATURDAY.—10 A.M., Out-patient Department, Dr. Drysdale, Dr. Kellie. 11.30 A.M., Roentgen Ray Department, Dr. Jordan.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.
Course of Demonstrations for Post-Graduates:—
THURSDAY.—4 P.M., Dr. D. Firth: Fibroid Lung.

THE THROAT HOSPITAL, Golden-square, W.
MONDAY.—5.15 P.M., Special Demonstration of Selected Cases.
THURSDAY.—5.15 P.M., Clinical Lecture.

For further particulars of the above Lectures, &c., see Advertisement Pages.

A DIARY OF CONGRESSES.

THE following Congresses, Conferences, and Exhibitions are announced. in 1914:—

May 1st–Nov. 1st (Lyons).—International Town Hygiene Exhibition.
,, 15th–Oct. 15th (Berne).—Swiss National Exhibition.
May–October (London, Shepherd's Bush).—Anglo-American Exposition.
June–July (Groningen).—University of Groningen 300th Anniversary Celebration.
July 15th–20th (Edinburgh).—Congress of the Royal Institute of Public Health.
,, 21st–23rd (Chester).—British Pharmaceutical Conference.
,, 27th–31st (London).—Fifth Annual Session of the Clinical Congress of Surgeons of North America.
,, 28th–31st (Aberdeen).—Eighty-second Annual Meeting of the British Medical Association.
July–September (Australia).—Eighty-fourth Annual Meeting of the British Association for the Advancement of Science. (July 28th to August 3rd at Perth, August 8th to 12th at Adelaide, August 13th to 19th at Melbourne, August 20th to 26th at Sydney, August 27th to Sept. 1st at Brisbane).
Aug. 2nd–10th (Paris).—Tenth Congress of Esperantists.
,, 3rd–8th (London).—Sixth International Dental Congress.
,, 10th–15th (St. Petersburg).—Twelfth International Congress of Ophthalmology.
,, 29th–Sept. 14th (Toronto).—Canadian National Exhibition.
Sept. 7th–12th (Berne).—International Congress for Neurology, Psychiatry, and Psychology.
,, 10th–12th (Fort William and Port Arthur, Ontario).—Fourth Annual Congress of the Canadian Public Health Association.
,, 21st–26th (Victoria, B.C.).—Dominion Exhibition.
,, 21st–28th (Vienna).—Third International Congress on Diseases of Occupation.
,, 30th–Oct. 4th (Brussels). Fourteenth French (de langue française) Congress of Medicine.
Oct. 31st–Nov. 2nd (Berlin).—First Congress of the International Society for Sexual Research.

EDITORIAL NOTICES.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITOR," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention should be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this office.

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

THE INDEX TO THE LANCET.

THE Index and Title-page to Vol. I. of 1914, which was completed with the issue of June 27th, were given in THE LANCET of July 4th.

VOLUMES AND CASES.

VOLUMES for the first half of the year 1914 are now ready. Bound in cloth, gilt lettered, price 16*s.* carriage extra.

Cases for binding the half-year's numbers are also ready. Cloth, gilt lettered, price 2*s.*, by post 2*s.* 3*d.*

To be obtained on application to the Manager, accompanied by remittance.

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WILL Subscribers please note that only those subscriptions which are sent direct to the Proprietors of THE LANCET at their Offices, 423, Strand, London, W.C., are dealt with by them? Subscriptions paid to London or to local newsagents (with none of whom have the Proprietors any connexion whatever) do not reach THE LANCET Offices, and consequently inquiries concerning missing copies, &c., should be sent to the Agent to whom the subscription is paid, and *not* to THE LANCET Offices.

Subscribers, by sending their subscriptions direct to THE LANCET Offices, will ensure regularity in the despatch of their Journals and an earlier delivery than the majority of Agents are able to effect.

THE COLONIAL AND FOREIGN EDITION (printed on thin paper) is published in time to catch the weekly Friday mails to all parts of the world.

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SOLE AGENTS FOR AMERICA—MESSRS. WILLIAM WOOD AND CO., 51, Fifth Avenue, New York, U.S.A.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)
THE LANCET Office, July 15th, 1914.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rain-fall.	Solar Radiation in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks.
July 9	30·17	S.W.	...	121	75	60	57	62	Cloudy
,, 10	30·20	S.E.	...	123	79	61	62	67	Fine
,, 11	30·09	E.	...	126	83	61	63	64	Overcast
,, 12	30·01	S.W.	0·19	108	75	63	64	65	Cloudy
,, 13	30·10	W.	...	127	79	62	63	64	Overcast
,, 14	30·02	S.W.	...	131	81	64	64	71	Fine
,, 15	29·90	W.	...	113	69	61	59	62	Cloudy

The following magazines, journals, &c., have been received:—Journal of Anatomy and Physiology, Clinical Medicine, Philippine Journal of Science, Child, l'Hygiène de la Viande et du Lait, Quarterly Journal of Experimental Physiology, Archives of Pediatrics, Bristol Medico-Chirurgical Journal, Bulletin of the Johns Hopkins Hospital, American Journal of Medical Sciences, Man, Surgery, Gynecology and Obstetrics, Bio-Chemical Journal, South African Medical Review, St. Paul Medical Journal, Revue de Chirurgie, Revue de Médecine, Journal of Surgery, Indian Medical Record, British Journal of Surgery, Illuminating Engineer, Journal of Obstetrics and Gynæcology of the British Empire.

Communications, Letters, &c., have been received from—

A.—Messrs. Allen and Hanburys, Lond.; A. Lea Bridge-road; Messrs. Armour and Co., Lond.; Dr. J. H. Ashworth, Cliftonville; Dr. F. S. Arnold, Bovingdon; Dr. E. Ash, Lond.; Mr. R. Andrews, Sidmouth; Mr. P. H. Adams, Oxford.

B.—Mr. W. Butterly, Liverpool; Messrs. W. H. Bailey and Son, Lond.; Dr. F. E. Batten, Lond.; Bradford Corporation, Clerk to the; Boy Scouts Association, Lond., Secretary of; Messrs. J. Beal and Son, Brighton; *Birmingham Daily Post*, Manager of; Bristol City Asylum, Clerk to the; Mrs. Burgess, Governor's Camp, Bengal; Messrs. Butterworth and Co., Lond.; Colonel C. J. Bamber, I.M.S., Lahore; Miss V. E. Bates, New York; Mr. H. Butterfield, Northampton; Messrs. A. Burbridge and Co., Lond.; Blackburn and East Lancashire Royal Infirmary, Secretary of; Messrs. Boswell and Tomlins, Wolverhampton; Mr. W. T. Beswick, Buxton; Birmingham University, Secretary of; Mr. George Brown, Callington; Dr. Henry Blake, Great Yarmouth; Mr. H. J. Bendahan, Lond.; Mr. Geoffrey Besant, Lond.

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H.—Mr. J. W. Hayes, Lond.; Dr. H. E. Haynes, Brentwood; Huddersfield Education Committee, Clerk to the; Dr. R. W. Hornabrook, Melbourne; Dr. H. M. Hicks, Amsterdam, N.Y.; Dr. E. C. Hort, Lond.; Dr. W. J. Howarth, Lond.; Dr. William Hunter, Lond.; Mr. C. A. Hill, Lond.; Hexham Rural District Council, Clerk to the; The Hospital, Newark, Secretary of; Dr. C. O. Hawthorne, Lond.

I.—I. T.; Lieutenant-Colonel T. W. Irvine, I.M.S., Peshawar; *Illuminating Engineer*, Editor of.

J.—Mr. W. Johnson, Lond.; Mr. Ellis O. Jones, Penygroes; Mr. F. S. C. James, Rochester, U.S.A.; Dr. O. Jennings, Peebles; Mr. Thomas Johnston, Hove.

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